

PRELIMINARY INVESTIGATION OF THE
GENERAL INSTRUMENTS CORPORATION SITE
HICKSVILLE, NASSAU COUNTY, NEW YORK

PHASE I. SUMMARY REPORT

Prepared for

New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

Prepared by

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November 1983

317120



CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	
1. SITE DESCRIPTION	1-1
2. USGS QUAD WITH SITE BOUNDARIES MARKED	2-1
3. PRELIMINARY HRS	3-1
4. DOCUMENTATION RECORDS FOR HRS	4-1
5. PRELIMINARY EPA SITE ASSESSMENT FORMS	5-1
5.1 EPA Form 2070-12 - Preliminary Assessment	5.1-1
5.2 EPA Form 2070-13 - Site Inspection Report	5.2-1
5.3 Site Inspection Summary	5.3-1
6. SITE HISTORY	6-1
7. SITE DATA	7-1
7.1 Site Area Surface Features	7-1
7.2 Site Hydrogeology	7-1
7.3 Summary of Past Sampling and Analysis	7-2
8. ADEQUACY OF AVAILABLE DATA TO PREPARE FINAL HRS	8-1
9. PHASE II WORK PLAN	9-1
APPENDIX: HAZARDOUS WASTE DISPOSAL SITES REPORT, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION	

EXECUTIVE SUMMARY

The General Instruments Corporation site (NY I.D. No. 130020, EPA I.D. No. NYD002045466) is located at 600 West John Street in Hicksville, Town of Oyster Bay, Nassau County, New York. The plant uses a variety of solvents and acids in the production of microelectronics components, and discharges its effluent to ground water via a recharge basin. The plant site and the surrounding area are flat and situated in a ground water recharge area, as is nearly all of Long Island, which depends on ground water as its sole source of water supply. Violations of effluent limitations for the recharge basin have occurred repeatedly for fluoride, pH, xylene, methylene chloride, ethyl benzene, and trichloroethylene. The plant is now required to hook up into the county sewer system.

In December 1980, General Instruments discovered that their underground waste solvent tank, which was being removed at the time, had been leaking, and reported the incident to the New York State Department of Environmental Conservation. Subsequent investigation revealed soil and ground water contamination. Two monitoring wells on the General Instruments' plant property were sampled in December 1981, one year after the leaky tank was reported, and in May 1982. The shallow well exhibited elevated concentrations of phenols, trichloroethylene, perchloroethylene, dichlorobenzene, xylene, 1,1,1-trichloroethane, and 1,2-dichloroethylene. These compounds were also found in samples from the deeper well, but at lower concentrations. Offsite monitoring wells within one mile of the site were found to contain 1,1,2-trichloroethylene, 1,1,1-trichloroethane, and other chlorinated hydrocarbons. Cleanup efforts to date (May 1983) involved excavation of 25 cubic yards of contaminated soil, installation of monitoring wells, and design of a system for cleansing the affected ground water.

The preliminary HRS scores for the General Instruments site are as follows: Migration Score (S_M) = 33.94; Direct Contact Score (S_{DC}) = 0. The migration score is attributable to documented ground water contamination. The available data are considered sufficient to support final HRS scores. Further sampling

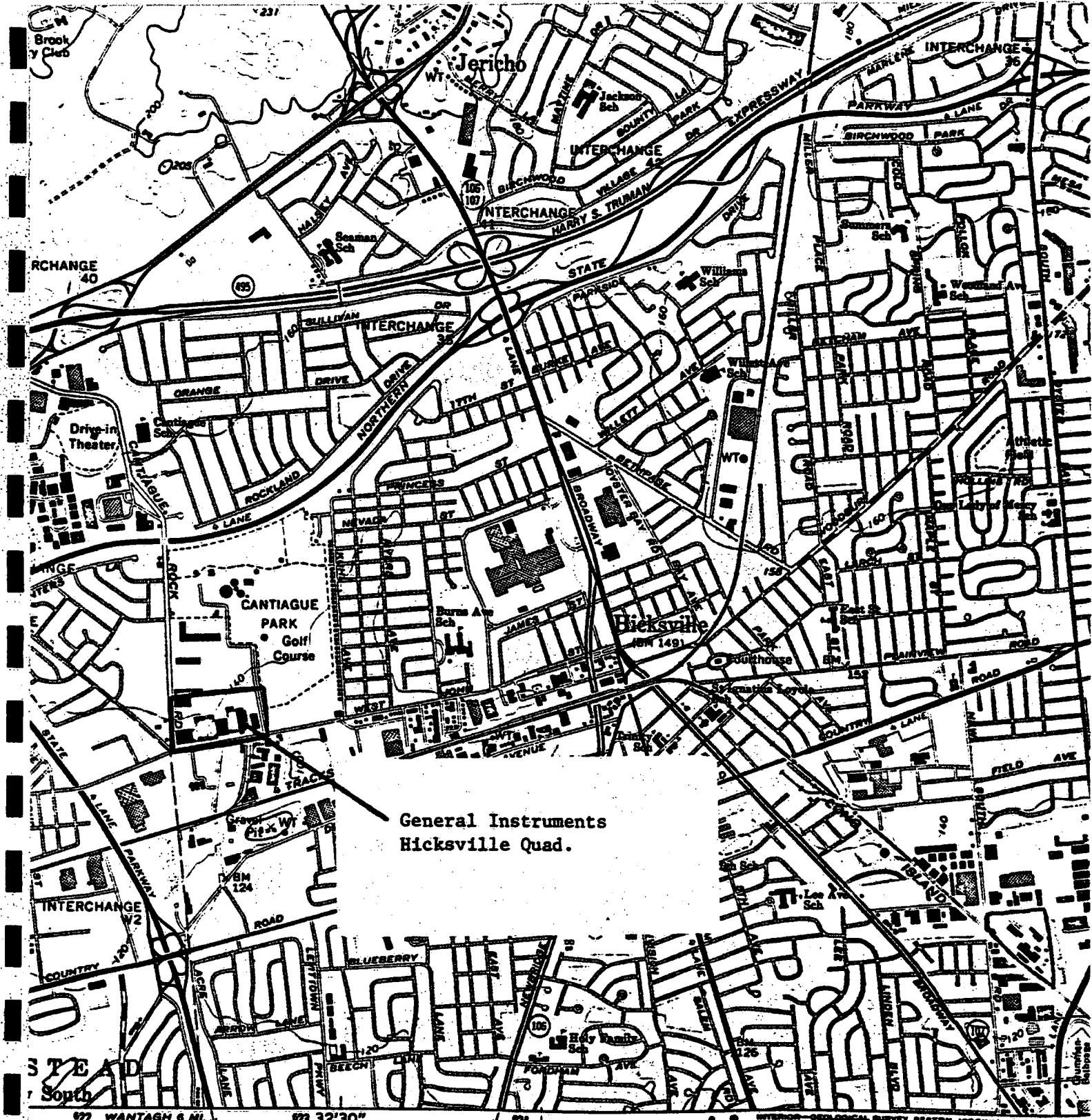
and analysis of ground water would not be expected to increase the scores. However, the status of the site (and score) may change after General Instruments' remedial activities are completed.

No Phase II efforts are recommended for the General Instruments site. However, it is recommended that the county and the state continue to monitor the progress of the remedial measures to insure that they are effective and not terminated prematurely.

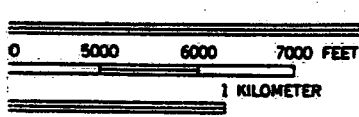
GENERAL INSTRUMENTS CORPORATION SITE

The General Instruments Corporation site (NY I.D. No. 130020, EPA I.D. No. NYD002045466) is located on Long Island at the intersection of West John Street and Cantiague Rock Road in Hicksville, a densely populated, urbanized area, in the Town of Oyster Bay, Nassau County, New York. The 12-acre plant is a manufacturer of microelectronics components, and uses a variety of solvents and acids in the production process. Wastewater is discharged to ground water by means of a recharge basin.

The plant was listed primarily because of leakage from an underground waste solvent tank discovered in 1980 and because of continuing violations of the requirements of the plant's discharge permit. Remedial action initiated by General Instruments has included excavation of 25 cubic yards of contaminated soil and design of a system for cleansing contaminated ground water in the immediate vicinity of the solvent tank.



General Instruments
Hicksville Quad.



FEET
JM OF 1929
IM IS MEAN LOW WATER
JMS IS VARIABLE
LINE OF MEAN HIGH WATER
ATELY 7.3 FEET



QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty	Light-duty
Medium-duty	Unimproved dirt

○ State Route

ACCURACY STANDARDS
RESTON, VIRGINIA 22092
180LS IS AVAILABLE ON REQUEST

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1977 and other source data. This information not field checked. Map edited 1979

HICKSVILLE, N.Y.

N4045—W7330/7.5

1967
PHOTOREVISED 1979
AMS 6265 I SE. SERIES VR21

federal register

**Friday
July 16, 1982**

*GENERAL INSTRUMENTS
SITE*

Part V

Environmental Protection Agency

**National Oil and Hazardous Substances
Contingency Plan**

02NY053

Facility name: General Instruments Corporation

Location: Hicksville, Nassau County, New York

EPA Region: II

Person(s) in charge of the facility: Allan H. Diamanti, Operations Manager
General Instruments Corp, 600 West John St.
Hicksville, NY 11802

Name of Reviewer: ECOLOGICAL ANALYSTS, INC., Date: 9 June 1983

General description of the facility:
(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

General Instruments manufactures microelectronics
components. Their process employs numerous
solvents, acids and other inorganic compounds. The
plant discharges to groundwater via a recharge basin,
and experienced leakage from an underground
waste solvent tank leading to groundwater
contamination.

Scores: $S_M = 33.94$ ($S_{gw} = 58.7$) ($S_{so} = 0$ $S_a = 0$)
 $S_{FE} = 0$
 $S_{OC} = 0$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 <u>45</u>	1	45	45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2		6		
Net Precipitation	0 1 2 3	1		3		
Permeability of the Unsaturated Zone	0 1 2 3	1		3		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score			N/A	15		
3 Containment	0 1 2 3	1	N/A	3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 <u>15</u> 18	1	15	18		
Hazardous Waste Quantity	0 1 <u>2</u> 3 4 5 6 7 8	1	2	8		
Total Waste Characteristics Score			17	26		
5 Targets					3.5	
Ground Water Use	0 1 2 <u>3</u>	3	9	9		
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 <u>35</u> 40	1	35	40		
Total Targets Score			44	49		
6 If line 1 is 45, multiply 1 x 4 x 5			33,660	57,330		
If line 1 is 0, multiply 2 x 3 x 4 x 5						
7 Divide line 6 by 57,330 and multiply by 100			S _{gw} = 58.71			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	<u>0</u> 45	1	<u>0</u>	45	4.1	
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .						
2 Route Characteristics					4.2	
Facility Slope and Intervening Terrain	0 1 2 3	1		3		
1-yr. 24-hr. Rainfall	0 1 2 3	1		3		
Distance to Nearest Surface Water	0 1 2 3	2		6		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score			<u>N/A</u>	15		
3 Containment	<u>0</u> 1 2 3	1	<u>0</u>	3	4.3	
4 Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 <u>15</u> 18	1	<u>15</u>	18		
Hazardous Waste Quantity	0 1 <u>2</u> 3 4 5 6 7 8	1	<u>2</u>	8		
Total Waste Characteristics Score			<u>17</u>	26		
5 Targets					4.5	
Surface Water Use	<u>0</u> 1 2 3	3	<u>0</u>	9		
Distance to a Sensitive Environment	<u>0</u> 1 2 3	2	<u>0</u>	6		
Population Served/Distance to Water Intake Downstream	<u>0</u> 4 6 8 10 12 16 18 20 24 30 32 35 40	1	<u>0</u>	40		
Total Targets Score			<u>0</u>	55		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			<u>0</u>	64,350		
7 Divide line 6 by 64,350 and multiply by 100			<u>0</u>			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	<u>0</u> 45	1	<u>0</u>	45	5.1	
Date and Location:						
Sampling Protocol:						
If line 1 is 0, the $S_a = 0$. Enter on line 5 If line 1 is 45, then proceed to line 2						
2 Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score			N/A	20		
3 Targets					5.3	
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score			N/A	39		
4 Multiply 1 x 2 x 3			<u>0</u>	35,100		
5 Divide line 4 by 35,100 and multiply by 100			$S_a = 0$			

FIGURE 9
AIR ROUTE WORK SHEET

BILLING CODE 6860-25-C

four-mile radius as well as transients such as workers in factories, offices, restaurants, motels, or students. It excludes travelers passing through the area. If aerial photography is used in making the count, assume 3.0 individuals per dwelling unit. Select the highest value for this rating factor as follows:

DISTANCE TO POPULATION FROM HAZARDOUS SUBSTANCE

Population	0-1 mile	1-2 miles	2-3 miles	3-4 miles
0	0	0	0	0
1 to 100	0	12	15	18
101 to 1,000	12	15	18	21
1,001 to 2,000	15	18	21	24
2,001 to 10,000	18	21	24	27
More than 10,000	21	24	27	30

Distance to sensitive environment is an indicator of the likelihood that a region that contains important biological resources or that is a fragile natural setting would suffer serious damage if hazardous substances were to be released from the facility. Assign a value from Table 10.

Land use indicates the nature and level of human activity in the vicinity of a facility. Assign highest applicable value from Table 13.

6.0 Computing the Migration Hazard Mode Score, S_m

To compute S_m , complete the work sheet (Figure 10) using the values of S_{gw} , S_{sw} , and S_a obtained from the previous sections.

7.0 Fire and Explosion

Compute a score for the fire and explosion hazard mode, S_{fe} , when either a state or local fire marshal has certified that the facility presents a significant fire or explosion threat to the public or to sensitive environments or there is a demonstrated fire and explosion threat based on field observations (e.g., combustible gas indicator readings). Document the threat.

7.1 Containment. Containment is an indicator of the measures that have been taken to minimize or prevent hazardous substances at the facility from catching fire or exploding. Normally it will be given a value of 3 on the work sheet (Figure 11). If no hazardous substances that are individually ignitable or explosive are present and those that may be hazardous in combination are segregated and isolated so that they cannot come together to form incompatible mixtures, assign this factor a value of 1.

7.2 Waste Characteristics. Direct evidence of ignitability or explosion potential may exist in the form of measurements with appropriate instruments. If so, assign this factor a value of 3; if not, assign a value of 0.

TABLE 13.—VALUES FOR LAND USE (AIR ROUTE)

Assigned value=	0	1	2	3
Distance to Commercial/Industrial	>1 mile	1 to 1 mile	1 to 1 mile	<1 mile
Distance to National/State Parks, Forests, Wildlife Reserves, and Residential Areas	>2 miles	1 to 2 miles	1 to 1 mile	<1 mile
Distance to Agricultural Lands (in Production within 5 years):				
Ag land	>1 mile	1 to 1 mile	1 to 1 mile	<1 mile
Prime Ag Land ¹	>2 miles	1 to 2 miles	1 to 1 mile	<1 mile
Distance to Historic/Landmark Sites (National Register of Historic Places and National Natural Landmarks)				Within view of site or 1/2 mile is subject to significant impacts.

¹Defined in the Code of Federal Regulations, 7 CFR 557.5, 1981.

	S	S^2
Groundwater Route Score (S_{gw})	58.71	3446.86
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		3446.86
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		58.71
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M$		33.94

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	0	45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2						
2 Accessibility	0	1 2 3	1		3	8.2
3 Containment	0	15	1		15	8.3
4 Waste Characteristics Toxicity	0	1 2 3	5		15	8.4
5 Targets:						8.5
Population Within a 1-Mile Radius	0	1 2 3 4 5	4		20	
Distance to a Critical Habitat	0	1 2 3	4		12	
Total Targets Score						32
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5						21,600
7 Divide line 6 by 21,600 and multiply by 100					SDC = 0	

FIGURE 12
DIRECT CONTACT WORK SHEET

June 28, 1982

02WY053

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME:

GENERAL INSTRUMENT CORPORATION

LOCATION:

HICKSVILLE, NASSAU County, NY

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

Trichloroethylene
Perchloroethylene
1, 2 Dichloroethylene
Dichlorobenzene
Xylene

(See Section 7)

Rationale for attributing the contaminants to the facility:

Compounds are in current use and/or were found at substantially elevated levels at the site of the leaky solvent tank

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Upper glacial
Magalloway
Raritan

(See Section 7)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Approx 80 ft

Depth from the ground surface to the lowest point of waste disposal/storage:

Approx 90 ft

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

N/A

Mean annual lake or seasonal evaporation (list months for seasonal):

N/A

Net precipitation (subtract the above figures):

N/A

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

N/A

Permeability associated with soil type:

N/A

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

N/A

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

N/A

Method with highest score:

N/A

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

<u>Compound</u>	<u>Toxicity</u>	<u>Persistence</u>	<u>Score</u>
TCE	2	2	12
PCE	2	3	15
trans-1,2-dichlorobenzene	2	3	15
1,2-dichloroethylene	2	3	15
xylene	2	1	9

Compound with highest score:

PCE, trans-1,2-dichlorobenzene, 1,2-dichloroethylene

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

3,000 gal (Volume of leaky tank)

Score = 2

Basis of estimating and/or computing waste quantity:

Volume of leaky tank. Actual volume may be greater if leak existed for a considerable time before detection, or less if leak was detected promptly.

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Drinking water - Sole Source.

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Well N 6819 Near Rond St. + Broadway (See Section 7)

Distance to above well or building:

3300 ft Score = 3

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

*Hicksville, Westbury and Bowling Green Water Districts
> 80,000 population. (NYS DOH, 1982. NYS Atlas of
Community Water System Sources)*

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

Unknown

Total population served by ground water within a 3-mile radius:

> 80,000 Score = 5

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None

Rationale for attributing the contaminants to the facility:

N/A

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

N/A

Name/description of nearest downslope surface water:

N/A

Average slope of terrain between facility and above-cited surface water body in percent:

N/A

Is the facility located either totally or partially in surface water?

N/A

Is the facility completely surrounded by areas of higher elevation?

N/A

1-Year 24-Hour Rainfall in Inches

N/A

Distance to Nearest Downslope Surface Water

N/A

Physical State of Waste

N/A

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Lagoon (below grade)
Disposal to groundwater

Method with highest score:

In either case waste is contained so that release
to surface water is virtually impossible.

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

N/A

Compound with highest score:

N/A

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

N/A

Basis of estimating and/or computing waste quantity:

N/A

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

N/A

Is there tidal influence?

N/A

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

N/A

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

N/A

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

Zero

Computation of land area irrigated by above-cited intake(s) and
conversion to population (1.5 people per acre):

N/A

Total population served:

Zero

Name/description of nearest of above water bodies:

N/A

Distance to above-cited intakes, measured in stream miles.

N/A

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

None

Date and location of detection of contaminants

N/A

Methods used to detect the contaminants:

N/A

Rationale for attributing the contaminants to the site:

N/A

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

N/A

Most incompatible pair of compounds:

N/A

Toxicity

Most toxic compound:

N/A

Hazardous Waste Quantity

Total quantity of hazardous waste:

N/A

Basis of estimating and/or computing waste quantity:

N/A

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi

0 to 1 mi

0 to 1/2 mi

0 to 1/4 mi

N/A

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

N/A

Distance to critical habitat of an endangered species, if 1 mile or less:

N/A

Land Use

Distance to commercial/industrial area, if 1 mile or less:

N/A

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

N/A

Distance to residential area, if 2 miles or less:

N/A

Distance to agricultural land in production within past 5 years, if 1 mile or less:

N/A

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

N/A

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

N/A

1982

DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

BRONX, KINGS, NASSAU, NEW YORK, QUEENS



A T

General Instruments
Site

SCALE 1:250,000

5

0

5 MILES

1 NORTH

General Instrument



Potential Hazardous Waste Site

Preliminary Assessment



Preliminary Assessment



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NY0002045466

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)

General Instrument Corporation

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER

600 West John Street

03 CITY

Hicksville

04 STATE

NY

05 ZIP CODE

11802

06 COUNTY

Nassau

07 COUNTY CODE

08 CONG DIST

09 COORDINATES LATITUDE

40 45 57.5

LONGITUDE

073 32 49.3

10 DIRECTIONS TO SITE (Starting from nearest public road)

Corner of West John SE. and Conrique Rock Rd.

III. RESPONSIBLE PARTIES

01 OWNER (if known)

General Instrument Corporation

02 STREET (Business, mailing, residence)

600 West John Street

03 CITY

Hicksville

04 STATE

NY

05 ZIP CODE

11802

06 TELEPHONE NUMBER

516 733-3000

07 OPERATOR (if known and different from owner)

Same

08 STREET (Business, mailing, residence)

09 CITY

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

()

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE

☐ B. FEDERAL:

(Agency name)

☐ C. STATE

☐ D. COUNTY

☐ E. MUNICIPAL

☐ F. OTHER:

(Specify)

☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: MONTH DAY YEAR

☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 d) DATE RECEIVED: MONTH DAY YEAR

☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☒ YES

DATE

5/3/83
MONTH DAY YEAR

☐ NO

BY (Check all that apply)

☐ A. EPA

☐ B. EPA CONTRACTOR

☐ C. STATE

☒ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL

☐ F. OTHER:

CONTRACTOR NAME(S):

Ecological Analysis

(Agency)

02 SITE STATUS (Check one)

☒ A. ACTIVE

☐ B. INACTIVE

☐ C. UNKNOWN

03 YEARS OF OPERATION

1973

BEGINNING YEAR

ENDING YEAR

☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

chlorinated hydrocarbon solvents

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

groundwater contamination

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH

(Inspection required promptly)

☒ B. MEDIUM

(Inspection required)

☐ C. LOW

(Inspect on time available basis)

☐ D. NONE

(No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT

Howard Shafer

02 OF (Agency/Organization)

Nassau County Dept. of Health

03 TELEPHONE NUMBER

516 535-2406

04 PERSON RESPONSIBLE FOR ASSESSMENT

J. Charles Bummer, Jr

05 AGENCY

06 ORGANIZATION

Ecological Analysis

07 TELEPHONE NUMBER

1301 771-4950

08 DATE

6/9/83
MONTH DAY YEAR

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)	02 WASTE QUANTITY AT SITE	03 WASTE CHARACTERISTICS (Check all that apply)	
(Measure of waste quantities must be independent)			
<input type="checkbox"/> A. SOLID <input type="checkbox"/> E. SLURRY	TONS _____	<input checked="" type="checkbox"/> A. TOXIC <input type="checkbox"/> E. SOLUBLE	<input type="checkbox"/> I. HIGHLY VOLATILE
<input checked="" type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> F. LIQUID	CUBIC YARDS _____	<input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE
<input type="checkbox"/> C. SLUDGE <input type="checkbox"/> G. GAS	NO. OF DRUMS <u>60 (equivalent)</u>	<input type="checkbox"/> C. RADIOACTIVE <input type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE
<input type="checkbox"/> D. OTHER _____ (Specify)		<input checked="" type="checkbox"/> D. PERSISTENT <input type="checkbox"/> H. IGNITABLE	<input type="checkbox"/> L. INCOMPATIBLE
			<input type="checkbox"/> M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	3,000	gal	est. in groundwater
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

[illegible]

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VL SOURCES OF INFORMATION (Give specific references, e.g., state files, service analysis, reports)

Nassau County Dept of Health Files
New York Dept of Environmental Conservation Files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE: NY 02 SITE NUMBER: NYD002045466

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 280,000

02 ☒ OBSERVED (DATE: 1980)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Monitoring wells indicate groundwater contamination with solvents

01 ☒ B. SURFACE WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

No surface route to streams

01 ☒ C. CONTAMINATION OF AIR

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Not reported

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Not reported

01 ☒ E. DIRECT CONTACT

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

None

01 ☒ F. CONTAMINATION OF SOIL

03 AREA POTENTIALLY AFFECTED: _____
(Acres)

02 ☒ OBSERVED (DATE: 5/27/81)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Boring taken in vicinity of excavated leaking solvent tank indicates soil contamination with organics (see Section 7)

01 ☒ G. DRINKING WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 280,000

02 ☐ OBSERVED (DATE: _____)

☒ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Potable supply data not available to indicate contamination

01 ☒ H. WORKER EXPOSURE/INJURY

03 WORKERS POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Not evaluated

01 ☒ I. POPULATION EXPOSURE/INJURY

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Not evaluated



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NYD 002045466

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Not reported

01 ☒ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Not reported

01 ☒ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Not evaluated

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/Runoff/Standing Ponds, Leaking drums)
03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

04 NARRATIVE DESCRIPTION

Not reported

01 ☒ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Not evaluated

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Not evaluated

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____)

☐ POTENTIAL

☐ ALLEGED

Not reported

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: > 80,000

IV. COMMENTS

V. SOURCES OF INFORMATION (City specific references, e. g., state files, sample analysis, records)

Nassau Dept. Health
NYS DEC Files

GENERAL INSTRUMENT



Potential Hazardous Waste Site

Site Inspection Report



Site Inspection Report



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE NY 02 SITE NUMBER NY 1002045466

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) General Instruments Incorporated		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 600 West John Street			
03 CITY Hicksville	04 STATE NY	05 ZIP CODE 11802	06 COUNTY Nassau	07 COUNTY CODE	08 CONG DIST
09 COORDINATES LATITUDE 40 45 52.5 LONGITUDE 073 32 49.3		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER <input type="checkbox"/> G. UNKNOWN			

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 5.3.83 MONTH DAY YEAR	02 SITE STATUS <input checked="" type="checkbox"/> ACTIVE <input type="checkbox"/> INACTIVE	03 YEARS OF OPERATION 1973 BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. MUNICIPAL <input type="checkbox"/> D. MUNICIPAL CONTRACTOR <input type="checkbox"/> E. STATE <input checked="" type="checkbox"/> F. STATE CONTRACTOR Ecological Analysts <input type="checkbox"/> G. OTHER			
05 CHIEF INSPECTOR J. Charles Baumer, Jr.	06 TITLE Senior Scientist	07 ORGANIZATION Ecological Analysts	08 TELEPHONE NO. (301) 771-4950
09 OTHER INSPECTORS Robert H. Seela	10 TITLE Assistant Scientist	11 ORGANIZATION "	12 TELEPHONE NO. (301) 771-4950
Howard Shaefer		Nassau County Dept of Health	(516) 535-2406
			()
			()
			()
13 SITE REPRESENTATIVES INTERVIEWED None	14 TITLE	15 ADDRESS	16 TELEPHONE NO. ()
			()
			()
			()
			()
			()
			()
17 ACCESS GAINED BY (Check one) <input type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 1000	19 WEATHER CONDITIONS	

IV. INFORMATION AVAILABLE FROM

01 CONTACT Howard Shaefer	02 OF (Agency/Organization) Nassau County Dept. of Health	03 TELEPHONE NO. (516) 535-2406
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM J. Charles Baumer, Jr.	05 AGENCY Ecological Analysts	06 ORGANIZATION Ecological Analysts
	07 TELEPHONE NO. 301-771-4950	08 DATE 6.9.83 MONTH DAY YEAR

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) <input type="checkbox"/> A. SOLID <input type="checkbox"/> B. POWDER, FINES <input type="checkbox"/> C. SLUDGE <input type="checkbox"/> D. OTHER _____ (Specify)	02 WASTE QUANTITY AT SITE (Measure of waste quantities must be independent) TONS _____ CUBIC YARDS _____ NO. OF DRUMS <u>60 (empty only)</u>	03 WASTE CHARACTERISTICS (Check all that apply) <input checked="" type="checkbox"/> A. TOXIC <input type="checkbox"/> B. CORROSIVE <input type="checkbox"/> C. RADIOACTIVE <input checked="" type="checkbox"/> D. PERSISTENT <input type="checkbox"/> E. SOLUBLE <input type="checkbox"/> F. INFECTIOUS <input type="checkbox"/> G. FLAMMABLE <input type="checkbox"/> H. IGNITABLE <input type="checkbox"/> I. HIGHLY VOLATILE <input type="checkbox"/> J. EXPLOSIVE <input type="checkbox"/> K. REACTIVE <input type="checkbox"/> L. INCOMPATIBLE <input type="checkbox"/> M. NOT APPLICABLE
--	---	--

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS	3,000	gal	in Groundwater
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

[illegible]

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VL SOURCES OF INFORMATION (City specific references, e.g., state files, sample analysis reports)

Nassau Co DOH
NY DEC



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NY0002045461

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUNDWATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 780,000

02 ☒ OBSERVED (DATE: 1/80)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☒ ALLEGED

Groundwater contaminated - Leaking underground waste solvent tank,
as determined from monitoring wells.

01 ☒ B. SURFACE WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

No surface water route

01 ☒ C. CONTAMINATION OF AIR

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

Not reported

01 ☒ D. FIRE/EXPLOSIVE CONDITIONS

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

Not reported

01 ☒ E. DIRECT CONTACT

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

None

01 ☒ F. CONTAMINATION OF SOIL

03 AREA POTENTIALLY AFFECTED: _____ (Acres)

02 ☒ OBSERVED (DATE: 5/27/81)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

Borings near excavated leaking solvent tank indicate
soil contamination with solvents.

01 ☒ G. DRINKING WATER CONTAMINATION

03 POPULATION POTENTIALLY AFFECTED: 280,000

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☒ POTENTIAL ☐ ALLEGED

No potable supply data to indicate contamination.

01 ☒ H. WORKER EXPOSURE/INJURY

03 WORKERS POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

Not evaluated

01 ☒ I. POPULATION EXPOSURE/INJURY

03 POPULATION POTENTIALLY AFFECTED: _____

02 ☐ OBSERVED (DATE: _____)

04 NARRATIVE DESCRIPTION

☐ POTENTIAL ☐ ALLEGED

Not evaluated



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NYD00204546

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None reported

01 ☒ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (include name(s) of species)

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

None reported

01 ☒ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

Not evaluated

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills/Punctured/Leaking Drums, Leaking Drums)
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

Not reported

01 ☒ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

Not evaluated

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

Not evaluated

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

Not reported

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 280,000

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

Nassau County DOH
NYDEC

NYS DOH Atlas of Community Water
Systems 1982



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE NY 02 SITE NUMBER NY/00204546C

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
<input checked="" type="checkbox"/> A. NPDES	<u>NY 0076 198</u>			
<input type="checkbox"/> B. UIC				
<input type="checkbox"/> C. AIR				
<input type="checkbox"/> D. RCRA				
<input type="checkbox"/> E. RCRA INTERIM STATUS				
<input type="checkbox"/> F. SPCC PLAN				
<input type="checkbox"/> G. STATE (Specify)				
<input type="checkbox"/> H. LOCAL (Specify)				
<input type="checkbox"/> I. OTHER (Specify)				
<input type="checkbox"/> J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE	04 TREATMENT (Check all that apply)	05 OTHER
<input type="checkbox"/> A. SURFACE IMPOUNDMENT			<input type="checkbox"/> A. INCINERATION	<input checked="" type="checkbox"/> BUILDINGS ON SITE
<input type="checkbox"/> B. PILES			<input type="checkbox"/> B. UNDERGROUND INJECTION	
<input type="checkbox"/> C. DRUMS, ABOVE GROUND			<input type="checkbox"/> C. CHEMICAL/PHYSICAL	
<input type="checkbox"/> D. TANK, ABOVE GROUND			<input type="checkbox"/> D. BIOLOGICAL	
<input type="checkbox"/> E. TANK, BELOW GROUND			<input type="checkbox"/> E. WASTE OIL PROCESSING	
<input type="checkbox"/> F. LANDFILL			<input type="checkbox"/> F. SOLVENT RECOVERY	
<input type="checkbox"/> G. LANDFARM			<input type="checkbox"/> G. OTHER RECYCLING/RECOVERY	
<input type="checkbox"/> H. OPEN DUMP			<input type="checkbox"/> H. OTHER (Specify)	
<input checked="" type="checkbox"/> I. OTHER <u>groundwater</u> (Specify)	<u>3000 (est)</u>	<u>gal</u>		06 AREA OF SITE <u>12</u> (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Contaminants were released to groundwater as a result of tank failure

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

*Nassau Co DOH
New York DEC*



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NY NYD001204546

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY
(Check as appropriate)

SURFACE WELL
COMMUNITY A. ☐ B. ☒
NON-COMMUNITY C. ☐ D. ☒

02 STATUS

ENDANGERED AFFECTED MONITORED
A. ☒ B. ☐ C. ☐
D. ☒ E. ☐ F. ☐

03 DISTANCE TO SITE

A. 0.6 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING
(Other sources available)
COMMERCIAL, INDUSTRIAL, IRRIGATION
(No other water sources available)
☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION
(Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER > 8,000

03 DISTANCE TO NEAREST DRINKING WATER WELL 0.6 (mi)

04 DEPTH TO GROUNDWATER
80 (ft)

05 DIRECTION OF GROUNDWATER FLOW
S

06 DEPTH TO AQUIFER
OF CONCERN
80 (ft)

07 POTENTIAL YIELD
OF AQUIFER
_____ (gpd)

08 SOLE SOURCE AQUIFER
☒ YES ☐ NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

Urbanized area served by municipal well fields. Also numerous industrial wells in area.

10 RECHARGE AREA

☒ YES ☐ NO
COMMENTS

11 DISCHARGE AREA

☐ YES ☒ NO
COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION
DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY
IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☒ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:

None

AFFECTED

DISTANCE TO SITE

☐

☐

☐

(mi)

(mi)

(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE
A. _____
NO. OF PERSONS

TWO (2) MILES OF SITE
B. _____
NO. OF PERSONS

THREE (3) MILES OF SITE
C. 70,000
NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

0 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

04 DISTANCE TO NEAREST OFF-SITE BUILDING

< 0.1 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural village, densely populated urban area)

Urban - commercial, industrial, residential



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NY000204546

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. 10^{-6} - 10^{-8} cm/sec ☐ B. 10^{-4} - 10^{-6} cm/sec ☐ C. 10^{-2} - 10^{-3} cm/sec ☒ D. GREATER THAN 10^{-2} cm/sec

est

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-8} cm/sec) ☐ B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) ☐ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK

600 (ft)

04 DEPTH OF CONTAMINATED SOIL ZONE

60 (ft)

05 SOIL pH

unknown

06 NET PRECIPITATION

15 (in)

07 ONE YEAR 24 HOUR RAINFALL

2.5 (in)

08 SLOPE
SITE SLOPE

1 %

DIRECTION OF SITE SLOPE

S

TERRAIN AVERAGE SLOPE

1 %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

10

☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE

OTHER

A. _____ (mi)

B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)

ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL

RESIDENTIAL AREAS, NATIONAL/STATE PARKS,
FORESTS, OR WILDLIFE RESERVES

AGRICULTURAL LANDS
PRIME AG LAND AG LAND

A. 0 (mi)

B. 0.2 (mi)

C. _____ (mi)

D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site and surroundings are flat; area is urbanized and industrial.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

USGS Hicksville Quad Sheet
Nassau County DOH files
NY DEC files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I IDENTIFICATION

01 STATE 02 SITE NUMBER

NY

NY0002045460

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	0		
SURFACE WATER	0		
WASTE	0		
AIR	0		
RUNOFF	0		
SPILL	0		
SOIL	0		
VEGETATION	0		
OTHER	0		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
None	

IV. PHOTOGRAPHS AND MAPS

01 TYPE <input type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF _____ (Name of organization or individual)
03 MAPS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	04 LOCATION OF MAPS Ecological Analysts, Nassau Co DOT, NY DEC

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Nassau Co DOT Files
NY DEC Files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

L IDENTIFICATION

01 STATE 02 SITE NUMBER
NY NY0002045466

II. CURRENT OWNER(S)				PARENT COMPANY (if applicable)			
01 NAME General Instruments Inc.		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) 600 West John Street		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY Hicksville		06 STATE 07 ZIP CODE NY 11802		12 CITY		13 STATE 14 ZIP CODE	
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE 07 ZIP CODE		12 CITY		13 STATE 14 ZIP CODE	
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE 07 ZIP CODE		12 CITY		13 STATE 14 ZIP CODE	
01 NAME		02 D+B NUMBER		08 NAME		09 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		10 STREET ADDRESS (P.O. Box, RFD #, etc.)		11 SIC CODE	
05 CITY		06 STATE 07 ZIP CODE		12 CITY		13 STATE 14 ZIP CODE	
III. PREVIOUS OWNER(S) (List most recent first)				IV. REALTY OWNER(S) (if applicable; list most recent first)			
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE 07 ZIP CODE		05 CITY		06 STATE 07 ZIP CODE	
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE 07 ZIP CODE		05 CITY		06 STATE 07 ZIP CODE	
01 NAME		02 D+B NUMBER		01 NAME		02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE	
05 CITY		06 STATE 07 ZIP CODE		05 CITY		06 STATE 07 ZIP CODE	
V. SOURCES OF INFORMATION (Give specific references, e.g., state files, sample analysis, reports)							
Nassau Co. DOH files New York DEC files							



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NJ0002045466

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (if applicable)

01 NAME None		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER					

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from history)

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

01 NAME None		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

01 NAME		02 D+B NUMBER		10 NAME		11 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)		04 SIC CODE		12 STREET ADDRESS (P.O. Box, RFD #, etc.)		13 SIC CODE	
05 CITY		06 STATE	07 ZIP CODE	14 CITY		15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD					

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

Nassau County DOH
New York DEC



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NY NY02022045466

II. ON-SITE GENERATOR

01 NAME General Instrument Corp	02 D+B NUMBER	
03 STREET ADDRESS (P.O. Box, RFD #, etc.) 600 West John St	04 SIC CODE	
05 CITY Hicksville	06 STATE NY	

III. OFF-SITE GENERATOR(S)

01 NAME NONE KNOWN	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE		
05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

Nassau County DOH files
New York DEC files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

L IDENTIFICATION

01 STATE 02 SITE NUMBER

NY NY000204546

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A. WATER SUPPLY CLOSED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> D. SPILLED MATERIAL REMOVED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input checked="" type="checkbox"/> E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION 25 CY at site of leaky tank	02 DATE 1982	03 AGENCY Nassau Co DCA
01 <input type="checkbox"/> F. WASTE REPACKAGED 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> H. ON SITE BURIAL 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> L. ENCAPSULATION 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> N. CUTOFF WALLS 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION	02 DATE _____	03 AGENCY _____
01 <input type="checkbox"/> Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION	02 DATE _____	03 AGENCY _____



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NY NYD002045466

II. PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ S. CAPPING/COVERING
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ T. BULK TANKAGE REPAIRED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ U. GROUT CURTAIN CONSTRUCTED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ V. BOTTOM SEALED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ W. GAS CONTROL
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ X. FIRE CONTROL
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ Y. LEACHATE TREATMENT
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ Z. AREA EVACUATED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ 1. ACCESS TO SITE RESTRICTED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☐ 2. POPULATION RELOCATED
04 DESCRIPTION

02 DATE

03 AGENCY

01 ☒ 3. OTHER REMEDIAL ACTIVITIES
04 DESCRIPTION

02 DATE 1982

03 AGENCY

Water purification system has been designed and construction of some components was begun

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Nassau County DOH files
New York DEC files



POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE 02 SITE NUMBER
NY NYD0020466

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

New York DEC	5/16/79	Pine
"	7/25/79	Consent order
"	Jan 82	Notice of violation of remedial action plan

III. SOURCES OF INFORMATION (List specific references, e.g., state files, sample analysis reports)

Nassau County DOH files
New York DEC files

5.3 SITE INSPECTION SUMMARY

On 3 May 1983, Howard Shaefer of the Nassau County Department of Health showed the General Instruments site to Robert Seela and Charles Baummer. No plant personnel were interviewed, because arrangements for a formal site visit had not been finalized at the time.

There are apparently two areas of concern to the DEC: the site of an underground tank which had developed a leak, and the lagoon/seepage pit through which the plant's treated effluent is discharged to ground water.

According to Shaefer, the leaky tank has been removed and contaminated soil surrounding it has been excavated. All that is visible from the surface is a patch of fresh asphalt paving in a parking area.

The lagoon had a surface area of about 1/2-acre and was filled almost to the top with dark green water. Shaefer expressed dismay that there was so little freeboard in the lagoon at the time of inspection - the owner apparently is required to maintain sufficient capacity in the lagoon to accommodate stormwater.

6. SITE HISTORY

General Instruments Corporation, located in Hicksville, Nassau County, New York, is a microelectronics manufacturing firm whose main products are semiconductors and integrated circuits. The firm has been in operation in the Hicksville area for approximately 20 years and has been at the present location, 600 West John Street, for close to 10 years.

As a microelectronics producer, the major raw materials involved are acids (primarily hydrofluoric, phosphoric, sulfuric, and others) and solvents (primarily xylene, isopropanol, acetone, and others) (Attachment 6-1). These are used in a variety of processes, as are a number of other chemicals. Disposal of industrial wastewater at this site has been through ground water discharge by means of a single, large percolation pond located onsite. The firm has had a SPDES permit for these discharges since March 1975. Currently, acid wastes are being hauled offsite.

There have been a number of SPDES violations and non-compliances at this site (Attachment 6-2). Violations of effluent limitations have occurred repeatedly for fluoride, pH, xylene, methylene chloride, ethyl benzene, and trichloroethylene. Efforts by the Nassau County Department of Health (NCDH) to achieve compliance or abatement of violations have been lengthy and have had mixed results. The plant is now required to hook up into the county sewer system.

In December 1980, General Instruments discovered that their waste solvent tank, which was being removed at the time, had been leaking, and reported the incident to the New York Department of Environmental Conservation. Subsequent investigation revealed soil and ground water contamination. Cleanup efforts to date have involved excavation of 25 cubic yards of contaminated soil, installation of monitoring wells, and design of a system for cleansing the affected ground water (Attachment 6-3).

CHEMICALWEEKLY USAGE

acetic acid	8.6 gal
aluminum acetate	.3 lbs
acetone	78.1 gal
ammonium fluoride	82.3 gal
ammonium hydroxide	14.5 gal
boron tribromide	120 grams
dimethylformamide	20 gal
hexamethylsilazane	19 gal
hydrochloric acid	11.9 gal
hydrofluoric acid	41.7 gal
hydrogen peroxide	13.6 gal
isopropanol	23.5 gal
methanol	50.6 gal
nitric acid	25.5 gal
phosphoric acid	24.3 gal
phosphorous oxychloride	100 grams
potassium dichromate	3.2 lbs
sodium bisulfite	5.1 lbs
sulfuric acid	86.5 gal
trichloroethylene	28.3 gal
xylene	75 gal

Note: From 7-31-79 SPDES Permit Renewal Application

III. Materials Flow Description

Raw materials consist of various process chemicals including:

- Xylene
- Isopropanol
- Methanol
- Acetone
- Xylene-based photo-resist
- N-Butyl acetate-based photo-resist
- Hydrofluoric Acid
- Hydrochloric Acid
- Sulfuric Acid
- Phosphoric Acid
- Nitric Acid
- Acetic Acid

The materials are received at the receiving ramp and stored in the chemical shed. These materials are received in containers up to 55 gallons in capacity. The materials are distributed to the various laboratories and processing rooms in one-gallon quantities, or less, on an "as needed" basis.

Note: From "hold and haul" facility permit application and engineering report.



FRANCIS T. PURCELL
County Executive

HS HS
LL 05
NASSAU COUNTY DEPARTMENT OF HEALTH

240 OLD COUNTRY ROAD, MINEOLA, N.Y. 11501

FILE SPDES
Gen'l Corr.
JOHN J. DOWLING, M.D., M.P.H.
Commissioner

FRANCIS V. PADAR, P.E., M.C.E.
Deputy Commissioner
Division of Environmental Health

July 12, 1982

Attachment
6-2
1/26

Mr. Albert Machlin, P.E.
Regional Engineer
New York State Department of
Environmental Conservation
SUNY-Bldg. 40
Stony Brook, New York 11794

Re: General Instruments Corp.
Hicksville, N.Y. - Violations
of SPDES Permit NY-0076198

Dear Mr. Machlin:

General Instrument Corporation in Hicksville has been continually in violation of groundwater discharge standards and its SPDES permit limitations since March 1975. The facility has consistently failed to construct a wastewater treatment system and establish an abatement program for the purpose of correcting the continuing violations.

As a result, this matter is being referred to your office for appropriate legal action. Details are provided in the attached "Data Supporting Request for Legal Action."

If you have any questions, please call our Office of Industrial and Hazardous Wastes Management at 535-2406.

Very truly yours,

Francis V. Padar, P.E., M.C.E.
Deputy Commissioner

FVP:JS:ceg

cc: Joan B. Scherb, NYSDEC
Gerald Robin, NYSDEC
Gilbert E. Cusick, Chairman,
Hicksville Water District

Attachment 6.2
2 / 26

Nassau County Department of Health
Data Supporting Request for Legal Action
Office of Industrial & Hazardous Wastes Management

Date of Request: June 22, 1982

Regulatory Personnel: J. Schechter

Owner's Name: General Instrument Corporation

Owner's Address: 600 W. John St., Hicksville, N.Y. 11802

Facility Name: Same as above

Facility Address: Same as above

Responsible Officer: Robert P. Jones, General Manager
Allan H. Diamanti, Operations Manager

1. Specific Violations:

Violation of Environmental Conservation Law Sections 17-0501, 17-0511, and 17-0803.

General Instrument Corporation has been continually discharging industrial wastewaters in contravention of groundwater discharge standards and SPDES permit NY-0076198 since March 1975 for fluorides and pH, since August 1977 for 1,1,1-Trichloroethane and Trichloroethylene and since June 1982 for xylene, ethyl benzene and methylene chloride.

2. Background Information:

See attached

3/26

2. Background Information:

General Instrument Corporation (GIC) was issued a SPDES permit on March 24, 1975 for the discharge of wastewater from the manufacturing of electronic components (semi-conductors and integrated circuits). The permit was modified on April 1, 1976 to include initial effluent limitations and a schedule requiring compliance with final effluent limitations by July 1, 1977.

In April 1977, the NYSDEC disapproved an engineering report from GIC, deeming it unacceptable because it failed to detail a wastewater treatment system for meeting final effluent limitations.

Although GIC had embarked on a program to reduce the wastewater flow by reclaiming and reusing process wastewater, effluent limitations continued to be exceeded for fluoride and pH. As a result, this office in November 1977 requested that the NYSDEC hold a compliance conference.

Samples of wastewater tested by this office in 1977 and 1978 continued to show violations of effluent standards for fluoride and pH. In addition, violations were noted for trichloroethylene and 1,1,1-trichloroethane. As a result, this office in October 1978 again requested a compliance conference be held by the NYSDEC.

On May 16, 1979, a compliance conference was held before the regional attorney of the NYSDEC. The facility was fined \$2000 and agreed to a schedule of compliance for meeting effluent limitations by December 31, 1980.

An order on consent was issued by DEC on July 25, 1979 to GIC. The schedule of compliance contained wording errors identified by GIC in several letters to DEC in late 1979.

Several requests for changes in the schedule were made by GIC who subsequently never signed the order on consent.

On June 1, 1980, a renewal SPDES permit was issued to GIC and included a schedule of compliance for submission of an engineering report by May 15, 1980 and compliance with effluent limitations by June 30, 1981. The schedule was essentially the compliance schedule of the order on consent, with a six month extension to all dates.

By May 1980, GIC had completed the installation of the first of two reclaim systems, and had reduced the flow of wastewater from 250 gpm to 150 gpm. A second reclaim system was planned to be installed by April 1981, at which time GIC indicated over 90 percent of the discharge would be reused and the only remaining discharge would be non-contact cooling water, small amounts of boiler blowdown, and reclaim system regeneration wastewaters.

In May, June and July 1980, this office and DEC met with GIC and agreed to a new compliance schedule for meeting effluent limitations by December 1982, as well as a remedial action plan to be completed by April 1, 1981. The purpose of the remedial action plan was to reduce the amount of pollutants discharged by holding and carting all concentrated acid baths and all reclaim system regeneration wastes. (see letters dated June 19, 1980, August 18, 1980 and August 20, 1980.)

Attachment 6 2
4/26

In December 1980, by virtue of submitting a preliminary engineering report on time and meeting the remedial action plan date for holding and carting regeneration wastes (see letter dated October 28, 1980), GIC was in compliance with the agreements reached in July 1980.

In early 1981, GIC hired a new consulting engineer and replaced its manager of plant engineering. At a meeting in April 1981, GIC indicated it would meet the date for submission of an engineering report and advised this office that after installation of its second reclaim by June 30, 1981, process wastewater would no longer be discharged to groundwaters. In addition, GIC advised this office that it was in compliance with the remedial action plan for carting concentrated acids.

The engineering report was submitted on time in May 1981 and included a schedule for connecting all remaining wastewater discharges to the Nassau County Sewer System by April 15, 1982.

At a meeting in August 1981, it was discovered that GIC was not complying with the remedial action plan for holding and carting acids as this office had been advised in April 1981 and which had been scheduled to have occurred in January 1981. GIC agreed to immediately cease discharging concentrated acids. GIC again reiterated that after the installation of the second reclaim system, no process wastewater would be discharged.

At a meeting on December 7, 1981, GIC indicated that holding and carting of concentrated acids had been going on since October 15, 1981.

On December 28, 1981, the engineering report was approved and its schedule of compliance modified to require installation of the second reclaim system by January 1, 1982, carting of the second reclaim system regeneration wastes by February 1, 1982 and connection of remaining wastewaters to the sewer by July 15, 1982.

At an inspection on December 28, 1981, this office determined that concentrated acids were not being collected from all manufacturing processes, but were continuing to be discharged. In addition, it was determined that both reclaim systems were designed so that concentrated waste streams would bypass the system to protect it, and be discharged to the recharge basin.

In January 1982, GIC was formally notified of their violation of the remedial action plan (see letter dated January 6, 1982). By March 1, 1982, they indicated they were in compliance with the plan.

In March 1982, the SPDES permit was modified to include a compliance schedule requiring connection to the sewer system by August 15, 1982. GIC requested a modification to this schedule (see attached letter dated March 5, 1982), extending the connection date to August 1, 1983. In May 1982 this office advised GIC that this extension was unacceptable and should be modified to indicate connection to the sewer take place by December 10, 1982 (see attached letter dated May 5, 1982). On May 17, 1982 GIC responded to this office requesting that the date for connection remain unchanged at August 1, 1983. They also indicated that a petition had been filed with the Commission of NYSDEC relating to the reasonableness of groundwater discharge standards and their request to an extension of the SPDES permit schedule for sewer connection to August 1, 1983. The petition requests that a public hearing be held to discuss these matters.

Sampling of wastewater discharged by the facility (see attached Table I) indicates continuing violations of groundwater discharge standards for fluorides, pH, phenols, Trichloroethylene, xylene, ethylbenzene, and methylene chloride. Current wastewater flow is estimated to be 170,000 gallons per day.

3. Facts describing respondent's cooperation or lack thereof:

The facility has made progress towards reducing the wastewater flow from 360,000 gpd to 170,000 gpd, and is currently holding and carting concentrated waste streams. However, violations of groundwater discharge standards continue to exist for fluorides, pH and a variety of organic parameters. In addition, the facility has continually failed to meet milestone dates for complying with remedial action plans and has misled this office with misinformation concerning their actions to abate the continuing violations.

4. Other proceedings, if any, involving respondent:

On May 16, 1979, a compliance conference was held for the purpose of eliminating the continuing violations of groundwater discharge standards. A civil penalty of \$2000 was paid on June 19, 1982 but the order on consent issued on July 25, 1979 was never signed by the facility.

On February 13, 1981, the facility submitted an application for a Part 360 Solid Waste Management facility permit. The application was returned to the facility as incomplete on February 25, 1981. It has not been resubmitted to date.

5. Recommendations

An administrative hearing is recommended with a high priority.

Fine: To be determined by the regional attorney of the NYSDEC.

Compliance Schedule Recommendations

1. Immediately make application to the Nassau County Department of Public Works for connection of all industrial and sanitary wastewaters to the Sanitary Sewer System, and take all necessary steps thereafter to construct treatment facilities so that all industrial wastewaters will meet the Sewer Use Ordinance of Nassau County.
2. On or before December 10, 1982, discharge all industrial wastewaters, other than non-contact cooling water, to the sanitary sewer.
3. On or before December 10, 1982, cease discharging to groundwater all industrial wastewaters in contravention of SPDES permit conditions and effluent standards for discharge to Class GA waters.

Attachment 6-2
6/2/80

General Instrument Corp.
West John Street
Hicksville, N.Y.
Violations of Groundwater Discharge
Standards based on NCDH Sampling

Parameter	8/31/77	10/27/77	4/10/78	8/28/78	3/13/79	8/26/80	9/23/80	3/15/82	6/8/82	Groundwater Standards
Fluoride		60.0	78.0	80.0	20.0	35.0		24.5	9.45	3.0
pH		2.9	2.9	3.2	11.2	3.2		3.4	4.4	6.5-8.5
phenols								.010	.305	.002
1,1,1-Trichloroethane	.130						.052		.045	.050
Trichloroethylene	.160						.029	.013	5.800	.010
Xylene									1.400	.050
ethyl benzene									.320	.050
methylene chloride										

* All results in mg/l except pH which is in standard units.

**GENERAL
INSTRUMENT**

Microelectronics Division
General Instrument Corporation
600 West John Street
Hicksville NY 11802
516/733-3000

SPDES
Gen'l
Cone

Attachment 6.2

7/26

July 16, 1982

Nassau County Department of Health
240 Old Country Road
Mineola, New York 11501

Attn: Mr. Joseph Schechter

Dear Mr. Schechter:

Provided herein is the response to your letter of July 8, 1982, which identified the Department of Health laboratory results of the percolation pond wastewaters your department sampled on June 8, 1982.

Please be reminded that our current S.P.D.E.S. permit identifies discharge limits for only two of the seven items reported in violation of discharge standards, fluorides and ph, the balance of the items reported are for monitoring only.

Fluorides:

General Instrument is and has been carting all concentrated acids and has in fact considerably reduced the fluoride levels from greater than 30 mg/L averages to our current level hovering around 10 mg/L. Our consulting engineering firm of Betz, Converse and Murdoch (BCM) has performed a considerable amount of research in this area and advises that the 3 mg/L limitation is essentially unachievable for microelectronic manufacturing operations. BCM will address this issue in correspondence to be forwarded under separate cover.

PH

It was expected that the implementation of the concentrated acid carting would allow the ph to rise to about 6.5. Although we have experienced an increase of one point or so, it appears that some ph adjustment is necessary.

Until such time that we have an operational pre-treatment plant, we hereby agree to commence a manual ph adjustment program to bring the effluent to the 6.5 to 8.5 range.

RECEIVED

JUL 19 1982

NCDH
BLRM

GENERAL INSTRUMENT

Attachment 6.2

8/26

Mr. Joseph Schechter
July 16, 1982
Page Two

Methylene Chloride

General Instrument has not identified the source of this material, it is not used in this plant's processes. Our monthly variation over the last 12 month period has run from a low of .005 to a high of 2.0 mg/L.

BCM has advised that they have experienced similar inexplicable presences and wide excursions with other clients. One possibility that should be explored is cross contamination at the laboratories due to the high volatility of this material.

Trichloroethylene

General Instrument discontinued the use of this material in its entirety effective April 1, 1982.

Due to this material's volatility the same BCM comment applies as was true for methylene chloride.

Ethylbenzene, Xylene, Phenols

Ethylbenzene is not a material purchased or specifically utilized by General Instrument, however, it is probably produced as a by-product of heated xylene. Xylene is used as a developer and cleaning agent for negative photo resist and of course picks up some amount of phenols from contact with the resist during processing. The spent xylene as well as other spent solvents are designated for disposal down our dedicated, and clearly labeled solvent drains which collect into one 5000 gal. above ground storage tank. All operators receive a formal training program prior to assignment in the manufacturing area. The abnormally high concentrations of these materials in the sample indicates what must be termed as gross operator error. To preclude a recurrence, all employees in a position capable of having caused the subject discharge to the process wastewater, in lieu of the solvent drain are being tested, retrained and certified.

Please note that although the .305 mg/L level of phenol in the sample was abnormally high, that our normal process wastewater effluent range appears to be in the .05 to .1 range which is higher than the forthcoming .002 mg/L limitation to be imposed for groundwater discharge. BCM is currently reviewing this situation and will respond under separate cover.

Attachment 6
9/26

GENERAL INSTRUMENT

Mr. Joseph Schechter
July 16, 1982
Page Three


It is General Instrument's intent to comply with all federal, state, local regulations responsibly and as expeditiously as is possible. We have implemented extensive ongoing employee training programs; modified our processes within state of the art capabilities to minimize or eliminate substances such as TCE, Phenols and fluorides; implemented new process measures such as concentrated acid carting; installed deionized water recycle systems to minimize wastewater discharges; implemented regeneration acid waste hauling; are in the final stages of designing a wastewater treatment plant and are commencing with the piping system design to connect to the POTW.

We believe that we have initiated all of the measures to insure long term compliance and will emphasize employee training programs to preclude a recurrence.

Please don't hesitate to contact this writer should there be any questions.

Very truly yours,

GENERAL INSTRUMENT CORPORATION



A.H. Diamanti
Operations Manager

AHD:em

cc: Dept. of Commerce & Industry
1550 Franklin Ave.
Mineola, N.Y. 11501
Attn: Roy N. Caccitore

Mr. Edward J. Walsh, Esq.
Cullen & Dykman
1010 Franklin Ave.
Garden City, N.Y. 11530

N.Y. State Dept. of Environmental Conservation
Building 40-SUNY
Stony Brook, NY 11794
Attn: Regional Engineer-Region #1

Attachment 6-2
10/26

**GENERAL
INSTRUMENT**

Mr. Joseph Schechter
July 16, 1982
Page Four

cc: Betz, Converse & Murdoch
One Plymouth Meeting Mall
Plymouth Meeting, Pa. 19462
Attn: R. Rathmell
A. Bove

C. Chillemi-General Instrument, N.Y. Legal
S. Karch-General Instrument, Clifton, N.J.
R. Fink-General Instrument, Hicksville, N.Y.
C. Nielsen-General Instrument, Hicksville, N.Y.



FRANCIS T. PURCELL
County Executive

NASSAU COUNTY DEPARTMENT OF HEALTH

240 OLD COUNTRY ROAD, MINEOLA, N.Y. 11501

JOHN J. DOWLING, M.D.; M.P.H.
Commissioner

FRANCIS V. PADAR, P.E., M.C.E.
Deputy Commissioner
Division of Environmental Health

Attachment 6.2

11/26

July 21, 1982

A.H. Diamanti
Operations Manager
General Instrument Corp.
600 W. John St.
Hicksville, N.Y. 11802

Re: Industrial Wastewater
Discharge Sampling Results
of June 8, 1982

Dear Mr. Diamanti:

Your response of July 16, 1982 is incomplete in terms of identifying the sources of organic chemical contamination in your industrial wastewater discharge. There are numerous chemicals in use at your facility that could contribute to the violations noted in our letter of July 8, 1982.

In particular, our analysis of June 8, 1982 noted violations of 703.6 NYCRR groundwater discharge standards for the following parameters: methylene chloride, trichloroethylene, ethyl benzene, xylene and phenols. In addition, the analysis also detected the presence of the following compounds: chloroform 1,1,1 trichloroethane, tetrachloroethylene, toluene, dichlorobenzene and n-butyl acetate.

Some of the chemicals that are and have been in use at your facility that could contribute to the presence of these compounds in your discharge are listed below with their respective constituents.

1. Shipley - AZ 111s photo resist -
cellosolve acetate, n-butyl acetate, xylene, toluene
2. KTI Photo Resist- Standard Solvent mixture - ethylbenzene, xylene
3. KTI Photo Resist 752 - Xylene
4. Kodak HRP Developer
hydroquinone (a phenolic)
5. Kodak D-8 Developer
hydroquinone (a phenolic)
6. IRCL J-100 stripper
phenolics, tetrachloroethylene, dichlorobenzene
7. Freon TMC
methylene chloride, trichlorotrifluoromethane

12/24

8. Cobehn Solvent

Chloroform

Additional sources of these compounds include raw chemicals in use such as n-butyl acetate and xylene, as well as many of the other resists, resist rinses and developers.

You should identify those chemicals responsible for the contamination present in the discharge, their point of use in the manufacturing process, and steps taken to prevent their discharge. Your own discharge monitoring data has indicated that for some of these compounds, violations of the discharge standards has been a chronic problem despite the training that your personnel have received.

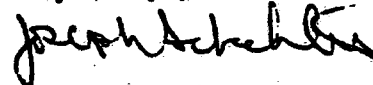
Please be reminded that the use of monitoring requirements rather than numerical standards in SPDES permits is for the purpose of gathering data on the identity and concentration level of all constituents that may be present and to insure that the discharge is in compliance with all part 703.6 NYCRR effluent limitations and guidelines adopted by the New York State Department of Environmental Conservation. If the data indicates that standards are being violated, the permit is modified to include numerical standards for those items in non-compliance and a schedule is adopted to eliminate those violations.

Please be reminded that you have failed to respond to our request that you begin weekly monitoring for ethylbenzene and dichlorobenzene.

This office requests that you complete your response to our July 8, 1982 letter by providing in writing within five days the identity and source of the chemicals causing the contamination of your industrial wastewater discharge, steps taken to eliminate the cause of the violations of groundwater discharge standards and your response to our request for additional monitoring.

If you have any questions concerning this matter, please contact our Office of Industrial & Hazardous Wastes Management at (516) 535-2406.

Very truly yours,



Joseph Schechter
Senior Sanitarian
Bureau of Land Resources
Management

JS:ceg

cc: Dr. Gerald Robin, NYSDEC
Mr. Edward J. Walsh, Jr.,
Cullen & Dykman

**GENERAL
INSTRUMENT**

HS HS
SLS BL
Microelectronics Division
General Instrument Corporation
600 West John Street
Hicksville NY 11802
516/733-3000
SPDFS
genlcn.

July 29, 1982

Attachment 62

12/26

Nassau County Department of Health
240 Old Country Road
Mineola, New York 11501

Attn: Mr. Joseph Schechter

Dear Mr. Schechter:

The following information is provided pursuant to your letter of July 21, 1982 requesting additional information.

In accordance with your request, weekly monitoring of ethylbenzene and dichlorobenzene will commence on August 1, 1982. ✓

The following is submitted in response to identify the sources of organic contaminants in the percolation pond sample of June 8, 1982.

Methylene Chloride

In our pursuit to determine the source of this material, we learned that our Maintenance Department had acquired the surplus production inventory of freon TMC and would occasionally use it to clean machine parts, then wash the residue down the wastewater drain.

We had discontinued the use of freon TMC in our mask making process over 18 months ago and all inventory was believed disposed of thru our H.W. disposal procedures. The Maintenance inventory has been confiscated and is now in our H.W. storage area awaiting disposal.

Maintenance will now utilize freon TF and dispose of it thru the plant solvent drains.

Trichloroethylene

We have re-examined our premises and personnel, and remain at a loss to explain the presence of this material in the percolation pond. We will advise with further findings if and when available.

Ethylbenzene, Xylene and Phenols

Ethylbenzene is produced as a by-product of heated Xylene. Heated Xylene is utilized as a cleaning step following removal of KTI negative photoresist from the wafer. The resist, which contains Phenols, is removed from the wafer using an A20 strip solution.

**GENERAL
INSTRUMENT**

Attachment 6.2

14/26

Mr. Joseph Schechter
July 29, 1982
Page Two

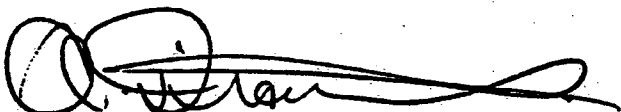
The spent Xylene and A20 stripper which now contains resist residues are designated for disposal thru the plant solvent drain lines which lead to a 5000 gallon above ground storage tank.

The excessively high quantities of this material found in the June 8, 1982 sampling of the percolation pond circumstantially indicates that an operator error was committed and that these materials were discharged down the wastewater drain in error, rejected by the reclaim system and were diverted to the pond.

It is felt that this was a one time occurrence and that our training program will preclude a re-occurrence.

Very truly yours,

GENERAL INSTRUMENT CORPORATION



A.H. Diamanti
Operations Manager

AHD:em

cc: Dept. of Commerce & Industry
1550 Franklin Ave.
Mineola, N.Y. 11501
Attn: Roy N. Caccitore

Mr. Edward J. Walsh, Esq.
Cullen & Dykman
1010 Franklin Ave.
Garden City, N.Y. 11530

N.Y. State Dept. of Environmental Conservation
Building 40-SUNY
Stony Brook, N.Y. 11794
Attn: Regional Engineer-Region #1

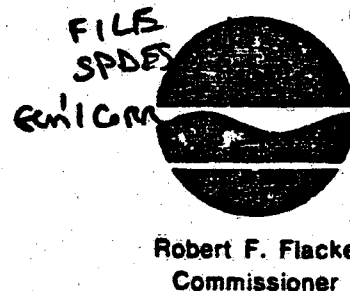
Betz, Converse & Murdoch
One Plymouth Meeting Mall
Plymouth Meeting, Pa. 19462
Attn: R. Rathmell, A. Bove.

RECEIVED

AUG 3 1982

NCDH
BLRM

LS → CC GED
New York State Department of Environmental Conservation
Building 40 - State University of New York
Stony Brook, New York 11794
(516) 751-7900



Attachment 6.2
15126

August 27, 1982

General Instruments Corp.
600 West John Street
Hicksville, New York 11802

Attention: Mr. Robert P. Jones, General Manager

Dear Mr. Jones:

Records of this Department indicate that you are in violation of Article 17 of the New York State Environmental Conservation Law, having reference to water pollution. It is alleged that you caused or permitted to be caused, the continuous contravening of groundwater standards and your State Pollutant Discharge Elimination System (SPDES) Permit for Fluorides and pH since March of 1975, For Trichloroethylene since August, 1977 and for Xylene, Benzene and Methylene Chloride since June of 1982.

In view of the foregoing, you are hereby requested to appear at this office on Wednesday, September 8, 1982 at two o'clock in the afternoon, in order that we may further discuss this matter.

If for any reason, you cannot appear on the aforementioned date or time, please contact this office immediately.

Very truly yours,

JOAN B. SCHERB
Regional Attorney

JBS:cm
cc: J. Schechter - NCDH ✓
G. Robin/T. Snyder
A. Machlin

RECEIVED
AUG 30 1982
NCDH
BLRM

General Inst. Corp.

Attachment 6.2

7/6/26

HOLD
IN
SPDES
FILE

SPDES permit issued 3/24/75, modified on 4/1/76
to include a compliance schedule requiring attainment
of operational level by 7/1/77 (interim levels for fluoride
to be 420 mg/l until 7/1/77).

Water recycling proposal submitted to DEC - August 1977
will treat w.w. remaining after recycle on line

8/12/77 - GIC TO NCDM - same as below

4/19/77 - engr report rec'd by DEC

4/26/77 - engr report disapproved because indicates further
study necessary after reclaim installed

legal action request sent 10/10/78

5/16/79 - Comp. Conference held. - Schedule - complete construction 12/31/80

7/27/79 - Order on consent sent to GIC

8/24/79 - GIC HAD FIRE on 8/9/82 in new bldg. -
Need change in schedule

9/4/79 Revised Consent order sent to GIC

9/11/79 GIC needs 4 mos. extension to schedule -
complete construction 4/30/81 / New recycle

System due 10/9/79

10/2/79

~~9/11/79~~ GIC requests compliance schedule change

11/29/79 Revised Compliance Schedule of consent order sent to GIC

(didn't include 4 mos. extensions as requested)

17/26

~~Completed const.~~~~August 77~~ ~~Fire in New Bldg.~~

2/6/79 Meeting NCDK + Gen. INST. - New compliance schedule agreed to: ~~Report~~ Report 5/15/80, complete const. 6/30/81

2-28-79 GIC TO DEC - review problems w/ consent order + requests CHANGE in schedule (5/15/80 - engr report)

March 1980 DI SYSTEM OPERATIONAL (New Bldg.)

- 29-80 Meeting - NCDK + Gen. INST.
Flow down from 250 TO 150 gpm, 2nd DI to be installed by 10/30/80 on "old bldg".
Only discharge to remain would be non-contact cooling + regeneration of DI system.
CAN'T PROVIDE REPORT - WANT CHANGE in schedule.
TOLD to send letter, pay fine + begin remedial work immediately - Preliminary report due 6/30/80

6-18-80 Letter J.S. TO Bittel Re: Agreements of 5/29/80

June 1980 Renewal since permit expires
consent order schedule with 6 Mos. extension

here is a Christmas Shutdown

Attachment 6.2
18/26

- 6-19-80 Letter Bittel to Scherb- ^{pay fine +} new schedule proposed
(indicates almost no flow after start
up of two systems - proposes new schedule
to have system operational 12/31/82 / Report by
April 31, 1981
- 6-25-80 NCDK acceptance ~~has~~ of schedule
based on decrease in loading to be demonstrated,
but require explanation of new schedule in prelim. eng. report
- 1/30/80
~~7-1-80~~ - Meeting NCDK + Gen'l Inst. - Schedule
of remedial action agreed to for Hold + Haul
- 7-14-80 - Meeting NCDK, DEC + GIC - new schedule agreed to
- 8-18-80 - Letter Bittel to Scherb - new schedule +
remedial action schedule (Reaction to her
schedule of 7/21/80 letter to GIC)
- 9-28-80 - Bittel to Scherb - 1st phase of remedial action
MET.
- 2-15-80 Leaking tank reported to DEC //
- ~~SPH~~
- 2-9-81 Leaking tank reported to NCDK by DEC
- 3-5-81 letter to DIAMANTI - set up meeting on leak
- MARCH 16/81
~~APRIL~~ ' New consultant hired.
- 3-27-81 Leaking tank meeting
- 4-16-81 waste acids still NOT being stored - to be
removed by 4-20-81 (820)

19/26

- 24-81 - Meeting BCM, NCDH + Gen'l Inst -
Eng'r. report to be on time - Advise
us that no process wastewater will
remain after installation of 2nd reclaim
(Note: Dan Bittel leaving company).
- 7-81 - Eng'r. report submitted to DEC Copy to NCDH dated
March 1981
will eliminate acid discharge
to percolation pond w/ HOLDING & HAULING ACIDS & NOT FLOWING POND
LOW STRENGTH MINERALS GO FROM 100% EX. TO POND
- 8-81 ~~Meeting~~ INSP: - soil borings at leak site - 3 samples
taken of soil
- 3-5-81 Meeting Gen'l Inst. + NCDH - Results of BCM
soil analysis; ~~REWORK~~ STILL NOT
CARTING ACIDS supposed to take place 1/31/81 -
Agree to do so immediately. 2nd reclaim
due 8/14/81 - After installation only
discharge should be boiler blowdown.
- 9-29-81 Letter BCM to NCDH - G.W. investigation
proposal
- 10-23-81 NCDH Response
- 12-1-81 BCM - Revised G.W. investigation
- 12-8-81 GIC Agree to revised investigation
- 12-7-81 Meeting GIC + NCDH - Advise that G.W. investigation
is only first phase / Advise that since
10-15-81 HOLDING & HAULING ACIDS
- 11-9-81, 12/10/81 Insps. of well drilling by NCDH

20/26

1-15-81 Letter BCM TO NCDH - CHANGE in construction of ~~well~~ shallow well.

1-21-81 Samples of wells by NCDH (organic + inorganic) (Show fluid)

1-28-81 DEC - TO - GIC - Engr report approved with schedule -

1. Installation new recycle 11/1/82

2. STARTUP & elimination of acid rinse 2/1/82

3. Hook up to sewer 7/15/82

5-82 ^{rechem} TOLD DIAMANTI - IF MEET GW. STDs CAN HAVE 2 WRS TO HOOKUP, OTHERWISE IMMEDIATELY

2-28-81 - Insp. GIC by NCDH - Determine Reclaim SYSTEM Bypasses TO Recharge basin - WATER B NOT HOLD + HAUL; Precipitate found in Recharge basin

~~Perm~~

1-6-82 - NCDH Letter TO DIAMANTI - RE: Remedial action schedule for holding & causting acids ~~not~~ 2 weeks TO hold all acids.

1-22-82 GIC TO NCDH will hold HAUL by 3/1/82

~~1-22-82~~ ~~Perm~~ ~~Modified~~ - sewer connection schedule

2-24-82 BCM TO NCDH - Recommendations on GW. problem

3-5-82 - GIC TO DEC - Schedule To Hook To sewer
By Aug 1, 1982

3-15-82 - GRAB sample - recharge basin

4-16-82 - NCDH letter TO GIC - begin soil
excavation + Resample wells → by
4/30/82 → ^{as of} propose cleanup of g.w. + Two weeks
to provide schedule for excavation + sampling

4-19-82 - Meeting NCDH + GIC - NOW HOLD +
HAUL ACIDS - TOLD TO expect warning letter
on SPDES UNS. Given results of 3-15-82 analysis
TOLD that could only extend schedule to
hook to sewer by 8/82 if successful in
reducing fluoride. Otherwise Permit conditions
will hold; but would not allow change to 8/83.

3-23-82 - SPDES permit modified w/ new schedule - hook to sewer 4/1/82

3-23-82 - Telum BCM Re: precipitate in BASIN

4-1-82 - GIC TO NCDH - will advise on schedule for
excavation + Resample in one week

4-8-82 - GIC TO NCDH - no need to cleanup G.W.

4-8-82 - GIC TO NCDH - Fluoride levels down, pH up due
to hold + haul

5-5-82 - Warning letter to GIC Re: SPDES
UNS. - Make immediate application to Hook
to Sewer; Change schedule to Hook up by 12/10/82

5-28-82 Warning letter to GIC Re: Leaking Tank
cleanup

5-27-82 BCM to NCDM - setup meeting on Tank leak

5-11-82 Meeting BCM + NCDM - cleanup plan to be
provided 6-16-82

5-13-82 BCM to NCDM - confirms 5/11/82 agreement

5-18-82 GIC to NCDM - Ed Walsh hired to
represent GIC in SPDES matters.

5-25-82 GIC to DEC - Modify monitoring requirements

5-2-82 Tellem NCDM to DEC - Re: monitoring charges
+ GIC request for hearing on sewer connection

6-3-82 Letter NCDM to DEC - Transmits WARNING
letter

6-4-82 DEC to DEC - Transmits hearing request
to Stony Brook

5-17-82 WALSH to NCDM - Answer to warning letter
Have requested hearing

5-20-82 - Two samples of well #1 (organics)

6-9-82 BCM TO NCDK - Confirm one week
extension to cleanup plan.

PAGE 1
FIRM NAME

General Instruments - Hicksville

effluent pipe

Attachment 4.2 2/1/86

MONTH	Cr ⁶	Cr ^{tot}	Cu	F	pH	Al	Cd	Pb	Ni	Ag	SO ₄	As
2-9-77	<.01	.29	.19	21.0	2.3							
4-10-78	*	<.01	.21	18.0	2.9							
8-28-78	<.01	.01	.17	30.0	3.2							
3-13-79	*	<.01	.24	30.0	11.2	tap prior to pump						
8-28-80	*	<.01	.15	35.0	3.2	<.05	.003	.03	.12	<.05	92	cont 851 lower page
3-15-82 RCB	.1	.10	2.05	24.5	3.4	.8	.007	.03	2.05	2.05	68	2.005

FIRM NAME

General Instruments - Hicksville

Attachment 6.2 25/26

	10			1000	002	8.0	1.0	.6	2.0	.04	500	1.0	.04	
MONTH	TKN	NO ₂	NO ₃	TDS	COND	Zn	Mn	Fe	Ba	Se	Cl	MBAS	Hg	
2-9-77	*	*	*	*	*	*		*						
4-10-78	*	*	*	*	*	*		*						
8-28-78	*	*	*	*	*	*		*						
3-13-79	*	*	*	*	*	*		*						
8-26-80	5.6	1.001	5.52	370	15.7	0.15		0.32						recharge basin
3-15-82	6.6	.002	2.26	211	75.9	.010	.10	2.05	.30	2.5	2.005	35	.07	.0001

FIRM NAME

General Instrument - Hicksville
ORGANICS (ppb)

Attachment 6.2 10/26

DATE	LOCAT- ION	B	T	X	1,2-DICHL SODIUM LENE	III Tri	SARS TETRA CL	TETRA (PERC)	TRIC ETHYL ENE	ETHYL BENZENE	ETHYL TOLUENE	DIETHYL BENZENE	METHYL CHLORIDE	DICHL BENZ- ENE	CHLORO FORM	FROM
9-23-80	RCB H2O	K5	K5	K5	*	52	K1	2	29							2
5-6-81	Spill site Soil B2 (10')	K3	160, 000	4,600, 000	*	8300	*	69,000	240, 000	1,200, 000	69, 000	53, 000	DETECTED 81 ms		1700	
5-6-81	Spill site Soil B4-25'	K3	34, 000	780, 000	*	1600	*	38, 000	140, 000	170, 000	12, 000	12, 000	*	*	390	
5-6-81	Spill site Soil B4-40'	K3	29, 000	780, 000	*	2900	*	38, 000	150, 000	200, 000	11, 000	11, 000	*	*	560	
12/21/81	South Well #2	NQ	102	87	*	18	K1	6	198	36	87	*	*	36	7	
12/2/81	North Well #1	for these reports see Gen Instrument file														
12/21/81	SPLIT well #1 + #2															
3-15-82	RCB	K3	K3	19	*	38	K1	K1	13	23					K1	
5-20-82	WELL #1 Pump at 113m	NR	10	2979	220	78	K1	334	1698	778			29	1101	23	
5-20-82	WELL #1 Pump at 113m	NR	16	1457	214	69	K1	328	1740	306			30	379	25	
6-8-82	RCB	L3	11	5800	225	85	L1	16	45	1400			320	47	11	



FRANCIS T. PURCELL
County Executive

Attachment 6-3 1/8
NASSAU COUNTY DEPARTMENT OF HEALTH

240 OLD COUNTRY ROAD, MINEOLA, N.Y. 11501

JOHN J. DOWLING, M.D., M.P.H.
Commissioner

FRANCIS V. PADAR, P.E., M.C.E.
Deputy Commissioner
Division of Environmental Health

HOLD
DATA SUPPORTING REQUEST FOR LEGAL ACTION
OFFICE OF INDUSTRIAL & HAZARDOUS WASTES MANAGEMENT

Date of Request : October 5, 1981

Regulatory Personnel: J. Schechter
L. Sama

Owner's Name : General Instrument Corp.

Owner's Address : 600 West John Street
Hicksville, New York

Facility Name : Same as Above

Facility Address: Same as Above

Responsible Officer: Robert P. Jones, Plant Manager

HOLD
1. SPECIFIC VIOLATIONS

Possible violation of Article 17, Sections 17-0501, 17-0505, 17-0511, and Article 27, Section 27-0913. Core samples of soil taken beneath the former location of a waste solvent storage tank were contaminated with aromatic hydrocarbons (toluene, xylene, ethylbenzene, ethyltoluene, diethylbenzene) and halogenated hydrocarbons (chloroform, 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene). Samples were analyzed by Nassau County Department of Health's Division of Laboratories.

2. BACKGROUND INFORMATION

On December 15, 1980 General Instrument Corporation advised NYSDEC (see attachment) that during the removal of an underground waste solvent storage tank, the facility discovered that the tank had been leaking. Waste solvents had contaminated the soil surrounding and beneath the tank. The facility removed some contaminated soil and backfilled the excavation.

On February 9, 1981, NYSDEC requested that NCHD investigate the adequacy of the cleanup operation (see attachment). On March 27, 1981 a meeting was held with the facility and NCHD and agreement was reached concerning a schedule of compliance to obtain soil samples to determine the vertical extent of the contamination.

MFC
Soil borings were obtained on March 6, 1981 and samples collected by NCHD. Analyses of these samples (see attachments) at depths of 10, 25, and 40 feet indicated high concentrations of several aromatic and halogenated hydrocarbons.

GENERAL INSTRUMENT CORP.
HICKSVILLE, NEW YORK

Attachment 6.3.

2/8 -2-

On August 5, 1981 a meeting was held with the facility and an additional schedule agreed upon for determining the lateral extent of the plume and establishing locations for the installation of groundwater monitoring wells upgradient and downgradient of the spill site by September 12, 1981. After completion of soil borings and groundwater sampling, a plan will be submitted by a consulting engineer for cleanup of the site.

3. FACTS DESCRIBING RESPONDENT'S COOPERATION OR LACK THEREOF

The facility management has been cooperative to date in supplying information and assistance. The facility management is responsible for having brought this situation to the attention of the regulatory agencies.

4. OTHER PROCEEDINGS, IF ANY, INVOLVING RESPONDENT

On May 16, 1979 a compliance conference was held with the facility to discuss violations of its SPDES permit (i.e., effluent limitation and compliance schedule violations). Agreement was reached on a new schedule of compliance for meeting effluent limitations, and a civil penalty of \$2000 was imposed.

The facility paid the fine on June 19, 1980 but did not sign the proposed order on consent due to errors in wording. On July 14, 1980 the facility, NYSDEC and NCHD agreed to a revised compliance schedule that is presently being met. The facility submitted an application for a 360 permit in February, 1981. The application was administratively incomplete and returned February 25, 1981. To date it has not been resubmitted by the facility. It appears this facility would qualify as a Group II for the purpose of a 360 permit.

5. RECOMMENDATIONS

It is recommended that a compliance conference be held.

Priority: High

Fine : To be determined by DEC Regional Attorney

Performance Bond: To be determined by evaluation of plan of action by respondent.

Consent Order Terms:

On or before Oct. 16, 1981

- Respondent shall obtain the services of a N.Y.S. licensed professional engineer.

On or before Oct. 16, 1981

- Respondent shall submit an approveable plan for determining the extent of soil and groundwater contamination by soil and groundwater sampling.

GENERAL INSTRUMENT CORP.
HICKSVILLE, NEW YORK

Attachment 6.3
3/8 -3-

5. RECOMMENDATIONS - Continued

- On or before November 13, 1981 - Respondent shall obtain and analyze soil and groundwater samples.
- On or before November 27, 1981 - Respondent shall submit an approveable cleanup plan for returning the environment to its prespill condition.
- On or before December 1, 1981 - Respondent shall commence cleanup activities.
- On or before December 31, 1981 - Respondent shall complete cleanup activities.

LS:sp
10-5-81

LABORATORY REPORT
DIVISION OF LABORATORIES AND RESEARCH
Nassau County Department of Health

Attachment 6.3
4/8

PB 800
Time
Col. By PB

1713

Date Collected 03/08/80

Date Received MAR 16 1980

Date of Analysis

Uses

METCO

Water Supply

PAIO.

Address

Deputy Av. N.Y.C.

Time of Collection

Check One:

☐ Distribution

☒ Well

☐ Other (specify)

Remarks

☒ Routine

☐ Resample

☐ Special

☐ Complaint

Lab. No.

6880

Rec. Code

Date 03/08/80

Well

☒ Raw(1)

☐ Treated(2)

☐ Other(3)

Lab. No.

TEST	RESULT	TEST	RESULT	TEST	RESULT
mg/ml		Nitrates (mg/1N)	6.24	Phenol	
5°C 24 hrs				Alkalinity (mg/1CaCO ₃)	
Coliform		COD (mg/1)		Total	
MPN/100ml		Chlorides (mg/1)	240	Phosphate (mg/1P)	
Color (units)	< 5	Total		Ortho	
Turbidity (units)	2	Hardness (mg/1CaCO ₃)	88	Phosphate (mg/1P)	
Odor: Cold	1A	Total Alkalinity (mg/1CaCO ₃)	24	MISCELLANEOUS	
Odor: Hot	1A	pH	6.2	Test	Code Result
Total Iron (mg/1)	0.31	Total Solids (mg/1)	196		
Manganese (mg/1)	< 0.05	Specific Cond. (mmhos)			
Free CO ₂		MBAS (mg/1)	< 0.02		
Nonco/T (mg/1)	32	Dissolved Oxygen (mg/1)			
Fluoride (mg/1)	< 0.10	Hexavalent Chromium (mg/1Cr+6)			
Free Ammonia (mg/1N)	0.050	Calcium Hardness (mg/1CaCO ₃)	64		
Alb. Ammonia (mg/1N)		Temp (Field) °F			
Nitrites (mg/1N)	0.000				

Remarks:

H₂ < 0.0005
SO₄ 46

Signature

Title

Date APR 1 1980

85 1/74

LABORATORY REPORT OF DRINKING WATER

DIVISION OF LABORATORIES AND RESEARCH

Nassau County Department of Health

Attachment 6.3

518

Field No. 1
Time 845
Col. By

1378 Date Collected 2-27-80 Date Received FEB 27 1980 Date of Analysis
Uses PRD Electronics Water Supply PNU

Address Prospect Ave New Cassel
Location of Collection 20' Pneu W/H Check One: ☐ Distribution ☒ Well ☐ Other (Specify)
☒ Routine ☐ Resample ☐ Special ☐ Complaint

Lab. No. N 9341 Rec. Code Date 2-27-80 Well ☒ Raw(1) ☐ Treated(2) ☐ Other(3) Lab. L.P.

TEST	RESULT	TEST	RESULT	TEST	RESULT
MC/ELV8		Nitrates (mg/1N)	1730	Phenol	
MC 2 hrs	2			Alkalinity (mg/1CaCO ₃)	
Uniform		COD (mg/1)		Total	
N/100ml	420	Chlorides (mg/1)	370	Phosphate (mg/1P)	
Color (units)	5	Total		Ortho	
Turbidity (units)	1	Hardness (mg/1CaCO ₃)	58	Phosphate (mg/1P)	
Color: Cold	1A	Total		MISCELLANEOUS	
Color: Hot	1A	Alkalinity (mg/1CaCO ₃)	7	Test	Code Result
Total Iron (mg/1)	0.23	pH	5.8	Pg	< 0.05
Manganese (mg/1)	0.05	Total Solids (mg/1)	242	As	< 0.005
Free CO ₂		Specific Cond. (mhos)		Ba	< 0.5
mg/100 (mg/1)	27	MBAS (mg/1)	0.27	Cd	0.001
Fluoride (mg/1)	< 0.10	Dissolved Oxygen (mg/1)		Cu-TOT	< 0.01
Free ammonia (mg/1N)	0.130	Hexavalent Chromium (mg/1Cr+6)		Cu	< 0.05
Total ammonia (mg/1N)		Calcium		Pb	0.01
Nitrites (mg/1N)	0.171	Hardness (mg/1CaCO ₃)	32	Se	< 0.005
		Temp (Field) °F		Zn	0.05

Remarks: Hg < 0.0005
Na 38.0
SO₄ 38

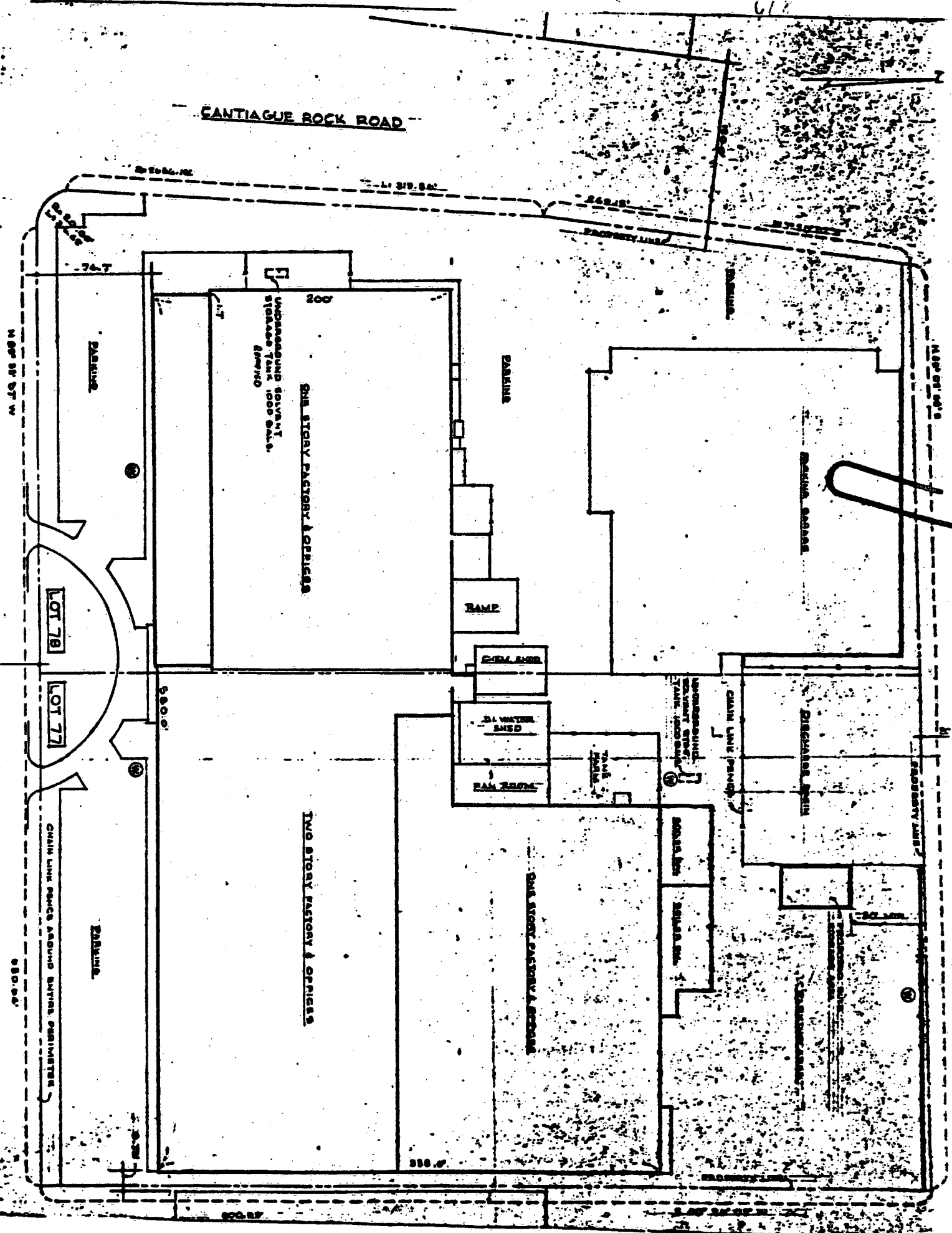
ABAC

IRON WELL

Signature Title Date Reported MAR 28 1980

FIGURE 1: MONITORING WELL LOCATIONS (10)

Handwritten: 612





HS HS
Attachment 63
718
Betz • Converse • Murdoch • Inc.

Consulting Engineers, Planners and Scientists

FILE
SPDES
Gen'l
Corr.

December 20, 1982

Mr. Joseph Schechter, Senior Sanitarian
Bureau of Land Resources Management
Office of Industrial Hazardous Waste Management
Nassau County Department of Health
240 Old Country Road
Mineola, NY 11501

Subject: General Instrument Corporation - Hicksville
Groundwater Management Program
BCM Project No. 00-5268-10

Dear Joe:

On behalf of our client, General Instrument Corporation, Betz Converse Murdoch Inc. (BCM) is pleased to provide you with a year-end progress report on the implementation of the groundwater management program at General Instrument's Hicksville facility.

Initiation of the program began immediately after the receipt of your September 8, 1982 letter, indicating the Nassau County Department of Health's approval of the program submitted by BCM on September 3, 1982. Upon completion of required intra-company allocation requests and approvals, General Instrument authorized BCM to begin work in October. To date, the following items have been completed:

1. Twenty-five cubic yards of contaminated soil were removed from the area surrounding the former location of the waste solvent storage tank. Removal and ultimate disposal of the soil was handled by firms registered to handle contaminated materials of the type found at General Instrument. You were informed in advance of the excavation activities and were present while the activities were completed.
2. The recharge bed and subsurface piping have been installed.
3. The design of the treatment system has been completed.
4. General Instrument has issued a purchase order to Rohm & Haas for the carbonaceous adsorbent.
5. Several other components of the system are on order by General Instrument.

Eastern Group

Betz • Converse • Murdoch • Inc.

Attachment 6.3

8/8

Mr. Joseph Schechter

-2-

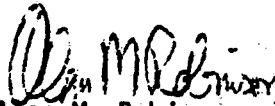
December 20, 1982

Presently, General Instrument is awaiting a price quote from one final supplier before ordering the last items required for the construction of the waste treatment facility. We expect that equipment purchase will be completed in early January. However, delivery of key components of the system will take 12 to 20 weeks. All vendors have been notified of General Instrument's wish to expedite equipment delivery.

We are pleased with the rapid rate of implementation of the program and still hope to begin the operation of the treatment system within the time frame agreed to in the approved program. General Instrument and we will keep you informed of progress and will provide you with notice of the dates for the start-up program as soon as construction is complete.

Best regards for the holidays and a good New Year. We will be talking with you soon.

Very truly yours,



Alan M. Robinson

Manager

Land & Water Resources Group

pd

cc: A. H. Diamanti, General Instrument
C. Neilson, General Instrument

RECEIVED

DEC 27 1982

NGDH
BLRM

7. SITE DATA

7.1 SITE AREA SURFACE FEATURES

The General Instruments site is located at Cantiague Rock Road and West John Street, Hicksville, Nassau County, New York. The surrounding area is an industrial park, but is also highly populated and urban. The Cantiague Park golf course is immediately north of the site. The topography is flat, and the closest stream shown on the USGS map of the area is more than 1 mile from the site.

Attachment 7.1-1 shows the plant layout, including the recharge basin and the former site of the leaky solvent tank where monitoring well No. 1 is presently located.

7.2 SITE HYDROGEOLOGY

The General Instruments site, located in Hicksville, New York, is located on stratified glacial deposits of sand and gravel with some thin interbedded clay lenses. The average depth to ground water is approximately 80 feet (Attachment 7.2-1). General ground water flow is to the south, but may be affected by pumping of ground water by public water supply companies.

There are three main water bearing formations in the area: the Upper Glacial aquifer, the Magothy Formation, and the Lloyd sand member of the Raritan Formation. These formations are each made up of sand deposits with some gravel and clay layers.

A Betz, Converse, and Murdoch report gives an evaluation of the hydrological characteristics of the immediate area (Attachment 7.2-2).

7.3 SUMMARY OF PAST SAMPLING AND ANALYSIS

Ground Water

Two monitoring wells on the General Instruments plant property were sampled in December 1981, one year after the leaky tank was reported, and in May 1982, and analyzed by Nassau County and by the owner's consultant. The shallow well (No. 1) exhibited elevated concentrations of phenols, trichloroethylene, perchloroethylene, dichlorobenzene, xylene, 1,1,1-trichloroethane, and 1,2-dichloroethylene. These compounds were also found in samples from the deeper well (No. 2), but at lower concentrations (Attachment 7.3-1). Offsite monitoring wells were found to contain 1,1,2-trichloroethylene, 1,1,1-trichloroethane, and other chlorinated hydrocarbons (Attachment 7.3-2).

Surface Water

No data are available.

Air

No data are available.

Soil

In May 1981, soil samples were taken at 10 foot intervals at depths between 45 and 85 feet. Thirteen compounds were found, including chlorinated hydrocarbons, butyl acetate, xylene, and ethylbenzene. The highest concentrations were found in the 45 foot sample (Attachment 7.3-3).

Attachment 7.1-1

FIGURE 1
GENERAL INSTRUMENT CORP.
SITE PLAN
WELL LOCATIONS

SCALE: 1" = 100'

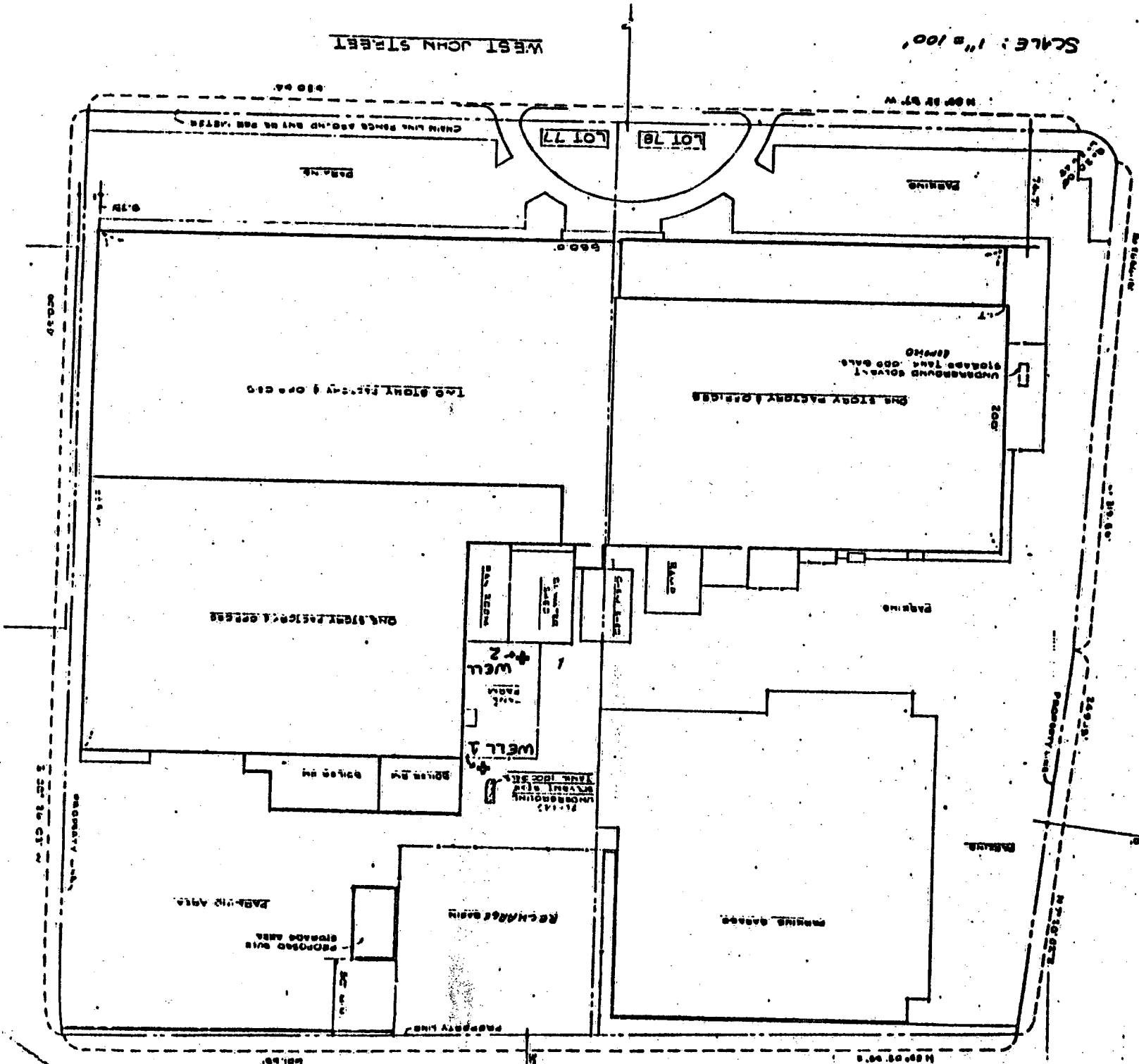
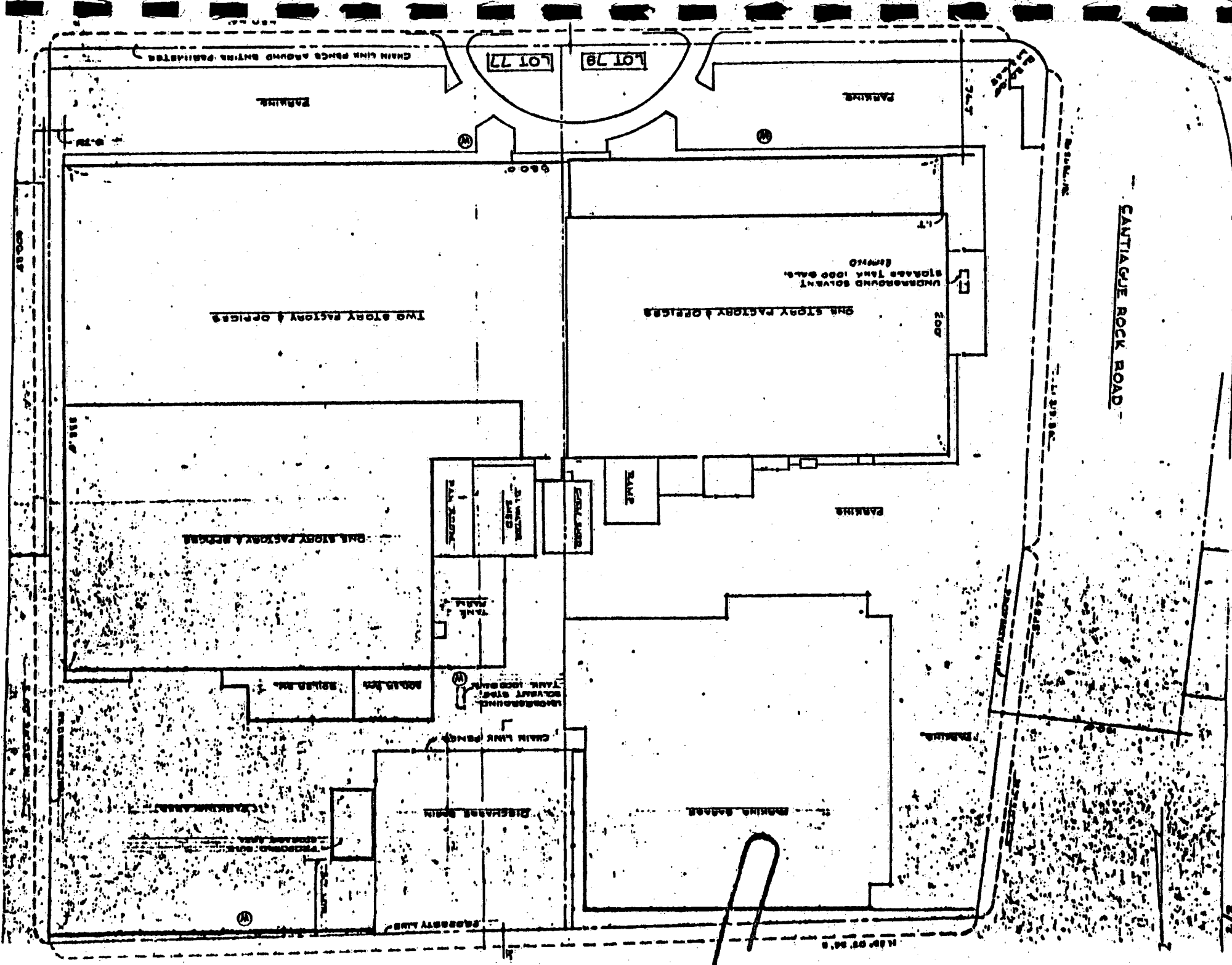


FIGURE 1: CONTINUING HELL LOCATIONS (C)

FM 601

APR 71-1 2/2



DOH

NASSAU

Attachment 7.2-1

1/3

J. Welsch Copy
ENGINEERING STUDY AND REPORT
INDUSTRIAL WASTE WATER COLLECTION,
TREATMENT AND DISPOSAL
GENERAL INSTRUMENT CORPORATION
HICKSVILLE, NASSAU COUNTY, NEW YORK

January 8, 1971

HOLZMACHER, McLENDON & MURRELL, P.C.
CONSULTING ENGINEERS

GROUND WATER AND WELL CONTAMINATION

Ground water is encountered approximately sixty (60) feet above mean sea level in the areas immediately adjacent to the Plant.* Ground surface elevations are approximately one hundred and forty (140) feet above mean sea level, with a resulting depth to ground water of approximately eighty (80) feet. Natural ground water flow is generally in a southerly direction, but may be artificially altered in a number of areas by pumpage from water supply wells.

Public water is available in all areas immediately surrounding General Instrument. Due to the proximity of public water mains, presumably all buildings (factories, commercial and dwellings) in the immediate area surrounding General Instrument utilizes public water from the Hicksville, Jericho or Westbury Water Districts rather than small private wells. The Hicksville Water District, supplying water to General Instrument, obtains the water from a number of large wells screened in the Magothy water-bearing strata.

The utilization of public water obtained from deep formations reduces the possibility of local contamination of shallow small private water supply wells by the industrial waste water discharges of General Instrument.

The locations of all known private and public water supply wells with capacities of 45 G.P.M. or larger, located within a one-mile radius of General Instrument, are shown on Drawing No. MI70-2-1, and tabulated in Appendix V of this study and report.

The closest well to General Instrument's leaching basin is Well No. N-6860, 260± feet southwest of the basin. This well is owned by General Instrument, but has not been used for years. The next closest well is Well No. N-6202, 1330± feet southwest of the plant. This well is within the direct path of natural ground water and waste water flow from the plant and therefore would be the most susceptible well to quality changes due to the waste water disposal facilities of General Instrument. No specific tests were performed, but there are no reported problems. No large public supply wells are located in the direct path of ground water and waste water flow within a one (1) mile radius of General Instrument. Nassau County Department of Health records do not indicate any contamination of any public water supply or any other large water supply well by the waste water discharges of General Instrument. This is probably due to

*Ground Water Contour Map, N.Y.S. Water Resources Commission, 1967.

the deeper depths of these public supply wells, and the protection afforded these wells by clay strata or lenses which separate the shallow strata in which the waste waters are discharged from the Magothy aquifer.

WATER QUALITY STANDARDS

In accordance with Section 1208, Article 12 of the New York State Public Health Law, the State and County Departments of Health are enforcing the adopted and assigned New York State Environmental Conservation Department Standards of Quality for Waste Water Discharges into the Ground Waters of the State of New York.

Under Schedule I of these standards, waste waters must receive adequate treatment so that the concentrations of many chemical constituents and physical properties of the waste waters do not exceed maximum allowable concentrations. A partial list of these limits applicable to General Instrument's waste waters are presented in Appendix V.

In the future when County sewers are extended to serve the Hicksville area, the waste water would no longer be required to meet the above Standards, but instead would have to comply to the Nassau County Department of Public Works Industrial Waste Water Standards, which currently are more lenient in the allowable concentrations of the above listed chemical constituents. Compliance with these standards is required to preserve the operation of the bio-oxidation treatment system. *Not's*

The County of Nassau Department of Public Works has completed construction of large interceptor sewers in the Seaford - Wantagh area and is currently constructing a secondary type water pollution control plant (sewage treatment plant) in Seaford. Under the current comprehensive sewer plan for southeastern Nassau County, known as Collection District No. 3, lateral sewers will be extended to serve the Hicksville area where General Instrument is located. Current estimates and plans indicate that sewers would be available in ten (10) to fifteen (15) years.

At such time, the present sanitary disposal system could be abandoned and the use of the industrial waste water leaching basin could be limited to recharge of uncontaminated cooling water. The waste treatment could be simplified and modified.

1.2 EVALUATION OF EXISTING WELLS

A well evaluation program was designed and implemented in May, 1982, to determine the feasibility of utilizing either (or both) of the existing wells for plume interception. This program had the following two objectives:

1. To determine the capacities of the wells relative to the pumping rates being considered
2. To determine important aquifer parameters - transmissivity(T) and permeability(K) - in order to establish the optimum pump rate and radius of influence

In terms of the well capacities, the wells were evaluated relative to two extreme possibilities - either the wells might not yield enough water and be pumped dry at the discharge rates of the tests, or the wells may yield water too easily and not develop a cone of depression sufficiently large to entrap the contaminant plume.

1.2.1 Specific Capacity Tests

The evaluation program consisted of a series of short-term modified pump tests designed to determine the specific capacity of the wells at different pumping rates. Specific capacity is a measure of the productivity of a well, given in gallons per minute per foot of drawdown (gpm/ft), and was determined by measuring the depth to water in the well at several times during the pump test, and measuring the pump discharge rate.

Three tests were performed on well No. 1 on May 20, 1982, and four tests on well No. 2 on May 21, 1982. The test schedule is outlined in Table 1.

TABLE 1
WELL EVALUATION TEST SCHEDULE

<u>Well No.</u>	<u>Test No.</u>	<u>Date Tested</u>	<u>Pump Rate (gpm)</u>	<u>Duration of Test (minutes)</u>
1	1	5/20	10.3	68.5
1	2	5/20	33.3	60
1	3	5/20	58	95
2	1	5/21	27.3	2.0
2	2	5/21	27.3	91
2	3	5/21	27.3	1.5
2	4	5/21	48.9	120

The tests were performed by the temporary installation of an electric submersible pump in the well (performed by a well driller/pump installer subcontractor). Water level measurements were taken through the use of an air line installed with the pump. The air line provided quick and relatively accurate water level measurements, although the resolution is limited to about $\pm 1/2$ foot. Pump discharge rates were determined by timing the rate of filling a container of known volume.

The detailed time and water/level data for each test is tabulated in Appendix 1 and graphically shown as time-drawdown plots on Figures 2 and 3. Table 2, below, summarizes the results of the specific capacity tests. Note that only the "long" duration tests (i.e. greater than 2 minutes) are used for specific capacity determinations.

TABLE 2
PUMP TEST RESULTS

Well No.	Test No.	Pump Rate (gpm)	Total Drawdown (ft)	Specific Capacity (gpm/ft)
1	1	10.3	2	5.1
1	2	33.3	5	6.6
1	3	58	10	5.8
2	2	27.3	7	3.9
2	4	48.9	16.5	3.0

The differences in specific capacities between the two wells, while not great, illustrate the nonhomogeneous nature of the aquifer. In addition, some variability may be due to differences in well construction. As a check on the reasonableness of the specific capacity determinations, data from the U.S. Geological Survey (1981) indicate a specific capacity of 10 gpm/ft for an 8-inch well (since destroyed) at the General Instrument plant. (The higher specific capacity is due to the larger diameter well.)

The specific capacity tests indicate that both wells yield sufficient water to prevent them from being pumped dry, even at relatively high discharge rates. Well No. 1 has an available drawdown (distance between the water table and a pump setting) of about 12 feet, which corresponds to a maximum discharge of about 70 gpm (using an average specific capacity of 5.8 gpm/ft). Similarly, well No. 2 has a maximum discharge of about 180 gpm, well above the values being considered for this study.

1.2.2 Determination of Aquifer Characteristics

In order to determine optimum pumping rates and radii of influence, it is necessary to know some key aquifer constants, such as permeability(K), a measure of the aquifer's capacity to transmit water, and transmissivity(T), a measure of permeability relative to the saturated thickness of the aquifer.

Time Since Pumping Started - minutes

Permeability and transmissivity are conventionally determined through pumping tests with water level measurements in one or more observation wells. Since water levels were only determined in the pumping wells for this study, some assumptions have to be made and the numbers generated have to be treated as rough estimates. To compensate, calculations of transmissivity are made through three different approaches and checked against values cited in the literature.

1.2.2.1 Specific Capacity/Transmissivity Relationships(1)

Estimates of transmissivity can be made from specific capacity data, assuming non-equilibrium conditions. Equations for doing so have been derived and make use of well function series and observation well data, but can be estimated, on a regional basis, with the following (McClymonds and Franke, 1972):

$$\bar{K} = C Q/sL$$

- where: \bar{K} = average permeability opposite well screen (equal to T/L), in gpm/ft²
 C = regional constant - in Long Island found to range between 1500 and 2000 (McClymonds and Franke, 1972)
 Q = discharge rate, gpm
 s = drawdown, ft
 L = length of well screen, ft

For this analysis, the lower value of C (1500) should be used to account for the relatively small diameter and the low specific capacity of the wells at General Instrument. The following table presents the estimates of \bar{K} from the five specific capacity tests:

Well No.	Specific Capacity (Q/s) gpm/ft	\bar{K} , gpm/ft ²
1	5.1	765
1	6.6	990
1	5.8	870
2	3.9	585
2	3.0	450

The average \bar{K} for well No. 1 is 875 gpd/ft²; for well No. 2 the average is 518 gpd/ft², indicating that the aquifer is slightly less permeable at well No. 2 than at well No. 1.

1.2.2.2 Specific Capacity/Transmissivity Relationship(2)

Specific capacity can be calculated directly from transmissivity using the following formula (Walton, 1962):

$$Cs = \frac{T}{264 \log (T/2693 r^2 S) - 65.5}$$

where: Cs = specific capacity, gpm/ft
 T = transmissivity, gpd/ft
 t = duration of pump test, minutes
 r = radius of well, feet
 S = storage coefficient

Assumptions used for this equation are that the aquifer is homogeneous, isotropic and nonleaky, that the discharge rate is constant, and that the well penetrates the aquifer fully. Although these assumptions are not met in reality, they are probably close enough not to significantly affect the calculations. S, the storage coefficient, is assumed to be 0.20 for this analysis.

The equation can be rewritten to calculate transmissivity from specific capacity, or successive approximations can be used. The following table presents the transmissivity values calculated from this equation and the corresponding permeability values:

Well No.	Test No.	T, gpd/ft	K, gpd/ft ² *
1	1	5,700	570
1	2	7,400	740
1	3	6,700	670
2	2	4,300	430
2	4	3,200	320
Well No. 1 Average:		6,600	660
Well No. 2 Average:		3,750	375

$$K = T/L$$

* Values of K assume 10 foot saturated thickness (length of screen)

1.2.2.3 Time-Drawdown Relationship

Transmissivity can be derived from a semi-log plot of time since pumping began (arithmetic scale) versus drawdown (log scale). Since equilibrium water levels were achieved very rapidly in both wells for most tests, the detailed data necessary to use the semi-log plot to calculate T was not obtained, except for the last test at 49 gpm in well No. 2. Water levels were measured every 5 seconds during the first minute of the test, which

provided details on the shape of the drawdown curve. In addition, the relative high rate of discharge caused water levels to continue to decline, albeit slightly, over the 2 hours of the test. Figure 4 presents the semi-log plot of the data from this test, with the appropriate straight-line portions fitted in.

The appropriate equation for this application is (Johnson, 1975):

$$T = \frac{264 Q}{s}$$

where: s = the drawdown over one log cycle, ft

The s derived from the plot is 0.55 ft yielding a transmissivity of 43,520 gpd/ft for the full saturated thickness. The corresponding permeability value, dividing the transmissivity by the full saturated thickness of 55 feet, is $K = 428$ gpd/ft².

1.2.2.4 Summary of Aquifer Characteristics

The transmissivities and permeabilities calculated by the three methods described above are very consistent, considering the wide range, over orders of magnitude, given as textbook examples for these parameters. The grand averages from the three techniques are as follows:

	<u>Transmissivity, gpd/ft</u>	<u>Permeability, gpd/ft²</u>
Well No. 1	6,600	768
Well No. 2	3,750	443

The differences in T and K between the two wells are not great, and indicate only minor differences in aquifer characteristics. In addition, published data (McClymonds and Franke, 1972) indicate permeabilities for the upper glacial aquifer to be between 300 and 2,200 gpd/ft², indicating that the values obtained above are well within the expected range.

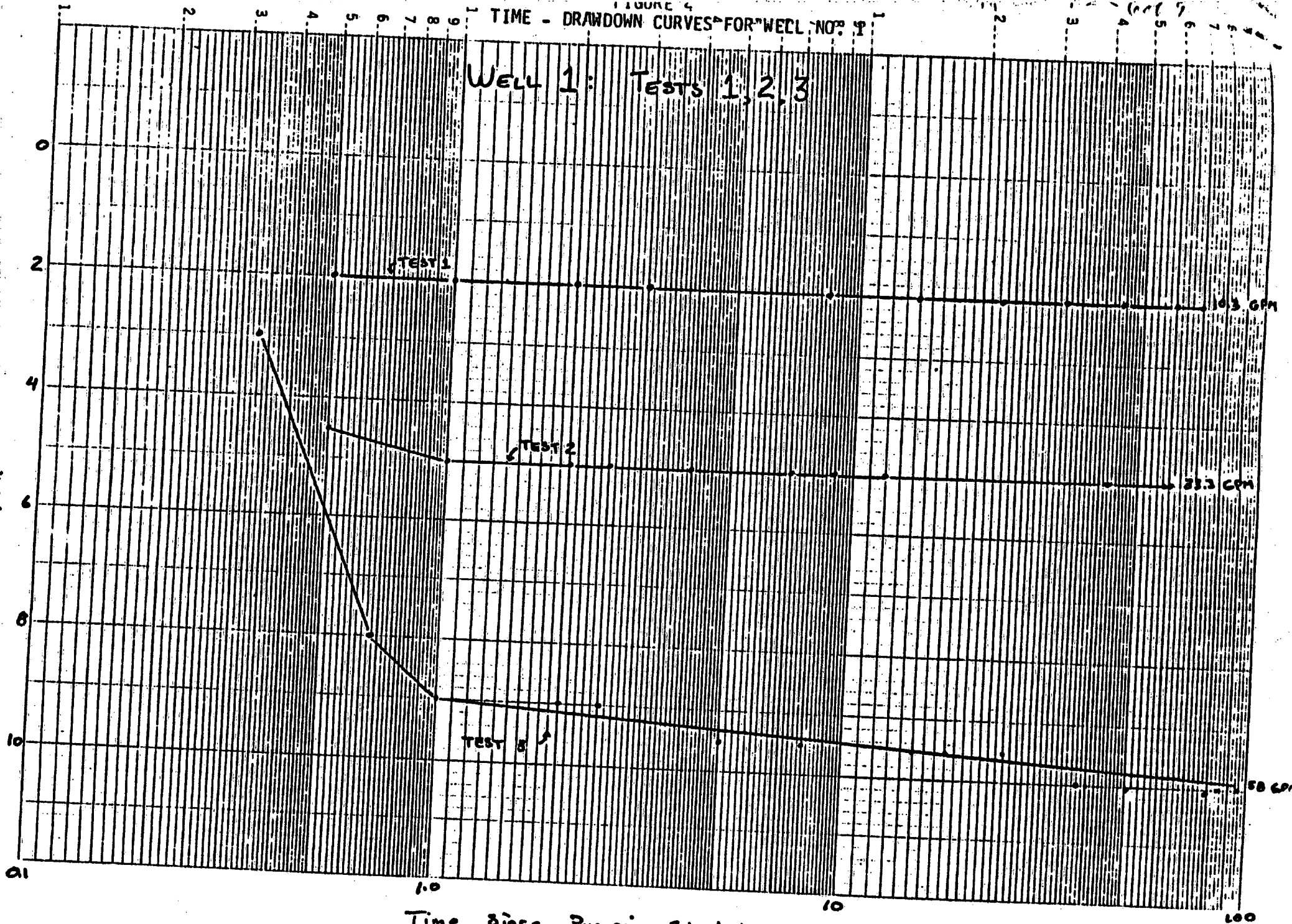
Since the two values presented above are "spot" values determined at the two wells, an average of the two ($K=605$) will be used in the remainder of this report. This average takes into account the variations in the aquifer that may occur throughout the area.

1.3 Optimum Pumping Rate

The pumping rate necessary to entrap the contamination plume is controlled by two factors: 1) the permeability of the aquifer (as determined in section 1.2; and 2) the size of the plume. For the purposes of this discussion, the size of the plume will be considered in terms of its radial extent from the recovery well perpendicular to the

FIGURE 4
TIME - DRAWDOWN CURVES FOR WELL NO. 1

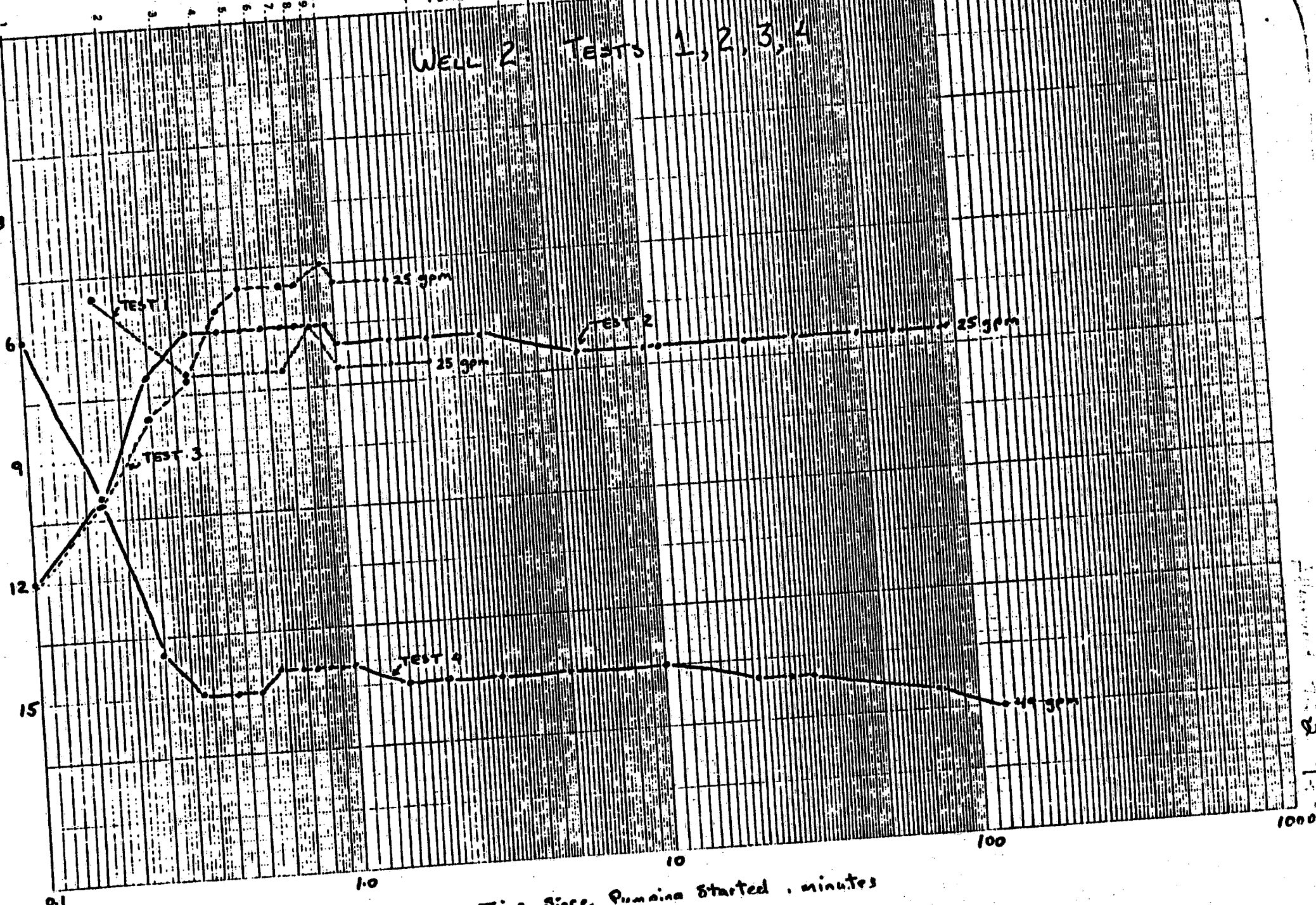
WELL 1: TESTS 1, 2, 3



Time Since Pumping Started, minutes
Time Since Pumping Started, minutes

FIGURE 3
TIME - DRAWDOWN CURVES FOR WELL NO. 2

WELL 2 TESTS 1, 2, 3, 4



TIME - DRAWDOWN CURVE FOR WELL NO. 2, TEST 4

WELL 2 TEST 4

$$Q = 49 \text{ gpm}$$

$$T = \frac{264.9}{\Delta S} = 23,520 \text{ gpm/ft}$$

$$P = \frac{T}{b} = \frac{23,520}{55} = 428 \text{ gpm/ft}^2$$

$\Delta S = 0.55$

+ time since pumping started minutes

March 1 1962
9:41 a

This analysis indicates that the radius of the plume at this point is about 5 feet. This agrees with the fact that the tank was about 5 feet wide in the dimension perpendicular to groundwater flow. However, to account for the simplifying assumptions used for this analysis, a conservatively based 2x margin of safety will be applied. Therefore, the radius of the plume will be taken as 10 feet for the discussions which follow.

1.3.2 Pumping Rate

Pump discharge rates can be calculated for any given radius of influence using an equilibrium formula, as follows (Johnson, 1972):

$$Q = \frac{K (H^2 - h^2)}{1055 \log R/r}$$

where: Q = discharge rate, gpm
K = permeability, gpd/ft²
H = saturated thickness - static, feet
h = saturated thickness - pumping, feet
R = radius of influence, feet
r = diameter of well, feet

A number of assumptions are inherent in this equation, including that the well fully penetrates the aquifer. Since this assumption is not met under the conditions of this test, H and h are taken as the distance from the pump intake (assumed to be 3 feet above the bottom of the well) to the water surface during static and pumping conditions respectively.

The values used for solving this equation and the resultant discharge rate are as follows:

K = 605 gpd/ft² (see section 2.2.2.4)
H = 12 feet
h = 9.1 feet (assuming 2.9 feet of drawdown)
R = 10 feet (see section 2.3.1)
r = 0.17 feet

Q = 19.8 gpm

Therefore, a pumping rate of 20 gpm should be sufficient to create an approximately-sized cone of influence around well No. 1 which will entrap the contamination plume.

Betz • Converse • Murdoch • Inc.

Attachment 7.3-1

1/4

GROUNDWATER QUALITY MANAGEMENT PROGRAM

FOR THE

GENERAL INSTRUMENT CORPORATION
600 WEST JOHN STREET
HICKSVILLE, NEW YORK 11501

BCM PROJECT NO. 00-5268-07

JUNE 1982

PREPARED BY:

BETZ • CONVERSE • MURDOCH • INC.
ONE PLYMOUTH MEETING MALL
PLYMOUTH MEETING, PENNSYLVANIA 19462

APPENDIX 3
ANALYTICAL DATA

WELL 1 - ANALYTICAL RESULTS
ALL VALUES IN PPB

	December 1981		May 1982			
	BCM	NCDOH	Start		End	
			BCM	NCDOH	BCM	NCDOH
Phenols	287	--	1,020	--	1,460	--
TCE	4,300	3,480	2,200	1,698	5,000	1,740
PCE	2,700	1,006	860	334	520	228
Dichlorobenzenes	1,200	7,170	1,100	1,101	300	379
Xylene	1,500	15,700	450	2,079 1,675	600	1,457
Isopropanol	4.9	--	--	--	--	--
Acetone	<0.1	--	--	--	--	--
Butyl Acetate	<0.2	--	--	--	--	--
Ethyl Acetate	<0.2	--	--	--	--	--
1,1,1, Trichloroethane	158	--	40	48	140	69
Butyl Alcohol	<0.2	165	--	--	--	--
Toluene	<0.7	74	<1	10	27	16
Ethylbenzene	23.6	4,470	<1	778	90	306
Ethyltoluene	--	--	--	--	--	--
Diethylbenzene	<2	--	--	--	--	--
Chloroform	75.2	17	60	23	47	25
Methylene Chloride	17	32	<1	29	31	30
1,1 Dichloroethylene	2.0	7	<1	<1	13	2
Trans-dichloroethylene	1,400	970	300	220	460	214
Benzene	<0.5	--	<1	--	<1	--
Vinyl Chloride	<0.1	--	<1	--	--	--

* "Start" and "End" refers to pumping tests
 -- Not analyzed

Attachment
7.3-1
4/4WELL NO. 2 - ANALYTICAL RESULTS
ALL VALUES IN PPB

Parameter	December 1981 Well No. 2		May 1982
	BCM	Nassau County	BCM
Phenol	66	**	--
Trichloroethylene	222	198	19
Tetrachloroethylene	7.0	6	<1
Dichlorobenzene	<3.0	36	<1
Xylene	54	87	600
Isopropanol	<0.1	**	--
Acetone	<0.1	**	--
Butyl Acetate	<0.2	**	--
Ethyl Acetate	<0.2	**	--
1,1,1 Trichloroethane	15.9	18	14
Butyl Acetate	<0.2	**	--
Toluene	128	102	<1
Ethylbenzene	10	36	<1
Ethyltoluene	**	**	--
Diethylbenzene	<2	**	--
Chloroform	16.1	7	1.8
Methylene Chloride	400	331	7.3
1,1 Dichloroethylene	<0.1	<1	<1
Trans-dichloroethylene	170	109	<1
Benzene	<0.5	*	<1
Vinyl Chloride	<0.1	<1	<1

* Not qualified, but present

** Not analyzed



FRANCIS T. PURCELL
County Executive

NASSAU COUNTY DEPARTMENT OF HEALTH

240 OLD COUNTRY ROAD, MINEOLA, N.Y. 11501

JOHN J. BOWLING, M.D., M.P.H.
Commissioner

FRANCIS V. PADAR, P.E., M.C.E.
Deputy Commissioner
Division of Environmental Health

April 8, 1982

FILE SPDES
Gen'l. INST.
Gen. CORR.

Mr. Alan Robinson
BCM, Inc.
1 Plymouth Meeting Mall
Plymouth Meeting, PA 19462

Re: Water Quality Data
Hicksville, NY Area

Dear Mr. Robinson,

As we discussed in our recent telephone conversation, enclosed are organic chemical results from public supply and monitoring wells in the area of Prospect Avenue (West John Street) and Cantiague Rock Road in Hicksville, New York.

The enclosed well data and maps are indexed to the State registration number, e.g., N7030, of the individual wells.

Should you require further information or clarification of the enclosed data, do not hesitate to contact me at 516-535-3325.

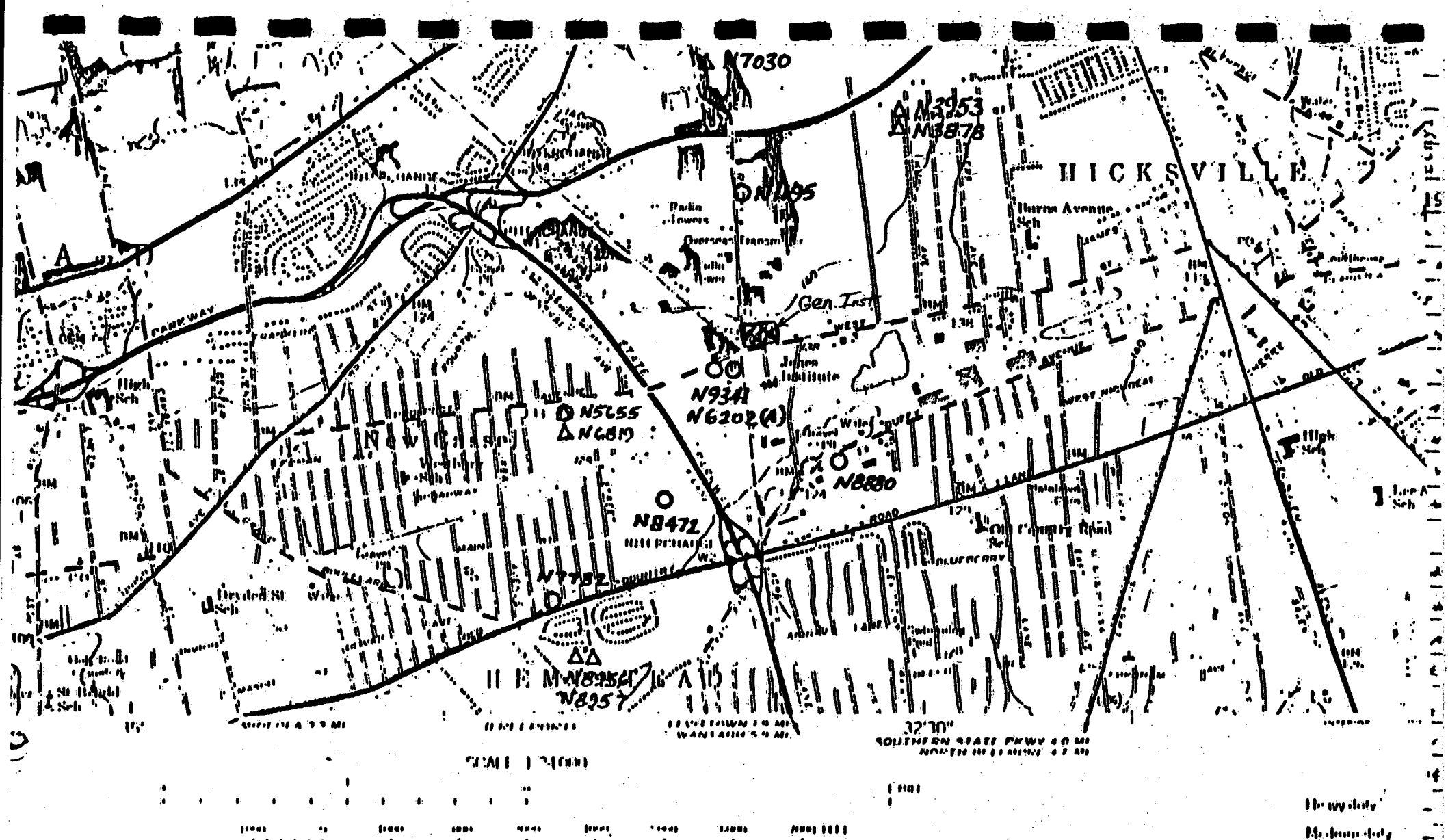
enc.

cc: J. Schechter, NCDH

Very truly yours,

Donald H. Myott

Donald H. Myott, P.E.
Senior Public Health Engineer
Bureau of Public Water Supply



FREEDPORT
NEW YORK
7.5 MINUTE SECTION
NORTH ARROW



DIVISION OF PHYSIOLOGICAL SERVICES.

MUNICIPAL WATER SUPPLY, DECAO COUNTY

CLG - Confirmed Lab
Sheet Received by
RCDH

7.3-2
5/11

7.3-2

WALTER SHERIDAN, JR., ALBANY COUNTY

0050175 606/12

1. Benzene		2. Toluene		3. Xylene		4. Ethylbenzene		5. Styrene		6. Propene		7. Butene		8. Pentene		9. Hexene		10. Heptene		11. Octene		12. Nonene		13. Decene		14. Undecene		15. Dodecene		16. Tridecene		17. Tetradecene		18. Pentadecene		19. Hexadecene		20. Heptadecene		21. Octadecene		22. Nonadecene		23. Eicosene		24. Heneicosene		25. Docosene		26. Tricosene		27. Tetracosene		28. Pentacosene		29. Hexacosene		30. Heptacosene		31. Octacosene		32. Nonacosene		33.triacontene		34.triacontene		35.triacontene		36.triacontene		37.triacontene		38.triacontene		39.triacontene		40.triacontene		41.triacontene		42.triacontene		43.triacontene		44.triacontene		45.triacontene		46.triacontene		47.triacontene		48.triacontene		49.triacontene		50.triacontene	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Non-drinking
Hicksville

DIVISION OF ENVIRONMENTAL SERVICES

MUNICIPAL WATER SUPPLIES, NASSAU COUNTY

Date Collected		Date Analyzed	Lab.	N-No.	Local Well No.	Depth (Fe.)	Running Time	Vinyl Chlorides	CHLOROETHYLENE			TriFluoro TriChloro Ethane	TriChloro Ethane	Chloroform	Toluene	Bromo Dichloro Methane	Carbon Tetrachloride	Benzene	Methylene Chloride	Ethyl Ether	1,1,2 Trichloro ethane	Comments	
(1)	(1a)	(2)	(3)	(4)	(4a)	(5)	(6)	(7)	1,2	1,1,2	TETRA	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	5663	- G	99	40 min	**	**	22	76	<1	7	4	**	<1	<1	**	**	**	<1	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	5663	-	99	3 hrs	**	**	14	43	<4	6	<4	**	<2	<2	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	5663	-	99	1 hr	**	**	8	18	<1	6	1	**	<1	<1	**	<1	**	<1	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	5663	-	99	1/2 hr	**	**	17	36	**	11	3	**	<1	<1	**	<10	**	<1	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	9018	-	402	2 hrs	**	**	<4	<2	<4	-2	<4	**	**	**	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	9018	-	1100	1 hr	**	**	**	**	**	**	**	**	**	**	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	9018	-	702	1 hr	**	**	**	**	**	**	**	**	**	**	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	8888	- G	111	20 min	**	**	31	13	<4	36	<4	**	<2	<2	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	8888	-	111	1 hr	**	**	13	4	<4	35	4	**	<2	<2	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	1197	- G	69	7 min	**	**	3119	6	<1	137	<1	**	<1	<1	**	47	**	<5	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	1197	-	69	10 min	**	**	3119	6	<1	137	<1	**	<1	<1	**	47	**	<5	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	1197	-	69	1/2 hr	**	**	1710	4	<4	80	<4	**	<2	<2	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	9019	- G	70	10 min	**	**	3	1	<1	8	<1	**	<1	<1	**	**	**	<1	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	9019	-	70	1 hr	**	**	12	7	<4	560	<4	**	<2	<2	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	9019	-	70	1 hr	**	**	12	7	<4	560	<4	**	<2	<2	**	**	**	**	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	1097	-	116	40 min	**	**	2	<1	<1	<1	<1	**	<1	<1	**	<40	**	<5	CLS	
9/12/18	9/12/18	NCDH	WISCONSIN STATE LAB	1195	-	116	40 min	**	**	<25	1	<1	**	<1	<1	<3	<1	<1	<3	<10	**	<1	CLS

LEGEND: * Analysis Still Underway ** Not Analyzed For: + Detected: - Not Detected

CLS - Confirmed Lab
Sheet Received by
NCDII

Non-drinking
Well

COMMENT

(21)

DIVISION OF ENVIRONMENTAL SERVICES

WATER SUPPLIES, HARRIS COUNTY

AD 7.3-2 8/11

Hicksville 2a		WATER SUPPLIES, HARRIS COUNTY																						
Well Number	Sample Number	Anthracene	Phthalates	Fluorene	Butyl Phenols	Benzene	Di-Chloro ethane	P.C.B.	Stenoform	1,1,1,2 Tetra chloroethane	Chlorodibromo methane	Cis 1,3 dichloro propene	Cis 1,2 di-chloroethylene	Trans-1,2 di-chloroethylene	1,1 dichloro-ethane	1,2 dichloro-ethane	1,1 dichloro-ethylene	1,1,2,2 tetra-Chloroethane	1,2 dichloro-propene	1,3 dichloro-propene	Trans-1,3 di-chloropropene	Chloro-trichloro ethylene	Stenoform	Trichloro fluore methane
WEP	24	++																						
RIP	XX																							
WEP	24	++																						
NA	AA																							
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NASSAU COUNTY DEPARTMENT OF HEALTH

CHRONOLOGICAL SUMMARY OF ORGANICS SAMPLING

At 7.3-2 9/11

DIVISION OF ENVIRONMENTAL SERVICES

MUNICIPAL WATER SUPPLIES, NASSAU COUNTY

Non-Drinking
Westbury

RESULTS (ug/l)										COMMENTS									
CHLOROETHYLENE										COMMENTS									
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LEGEND: * Analysis Still Underway; ** Not Analyzed For; + Detected; - Not Detected

7.3-2
9/11

WATER SUPPLIES, JAGSAG COUNTRY

AN 7.3.2 10/11

4.3-2
10/11

DIVISION OF ENVIRONMENTAL SERVICES

MUNICIPAL WATER SUPPLIES, NASSAU COUNTY

Non-Drinking
Westbury

-2

CLS - Confirmed Lab
Sheet Received by
NCDH

				RESULTS (ug/l)																	COMMENTS	
Lab.	N.S.	N-No.	Well No.	Depth (ft.)	Running Time	Vinyl Chlorides	CHLOROTHYLENE			Trifluoro Trichloro Ethane	1,1,1 Trichloro Ethane	Chloroform	Toluene	Bromo Dichloro Methane	Carbon Tetrachloride	Benzene	Ethylene Chloride	(Dichloroethane)	Ethyl Ether	1,1,2 Trichloro ethane		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	1,2 DI	1,1,2 TRI	1,1,1,2 TETRA	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)		
9/1/73	SA. GA	Andison. Chemicals	7732	10B	1 min	**	**	2.8	6.8	**	2.1	**	**	**	**	**	**	**	**	**	CLS	
9/1/73	SA. GA	Andison. Chemicals	7732	10B	1 min	**	**	2.8	6.8	**	2.1	**	**	**	**	**	**	**	**	**	CLS	
9/1/73	SA. GA	Andison. Chemicals	7732	10B	3 hrs	Sample shipped by Lab																
9/1/73	SA. GA	Andison. Chemicals	7732	10B	3 hrs	**	**	2.8	5.9	11	6.1	18	**	2.2	2.2	**	**	**	**	**	CLS	
9/1/73	SA. GA	Andison. Chemicals	7732	10B	1 1/2 hrs	**	**	2.3	5.3	6.3	4.8	20	**	2.2	2.2	**	**	**	**	**	CLS	

LEGEND: * Analysis Still Underway; ** Not Analyzed For; + Detected; - Not Detected

7.3-2
III

Betz • Converse • Murdoch • Inc.

Consulting Engineers, Planners and Architects

Attachment 7.3-3



1/3

June 8, 1981

General Instrument Corporation
Microelectronics Division
600 West John Street
P.O. Box 600
Hicksville, NY 11802

Attention: Mr. Al Diamanti

Subject: Analytical Results of Soil Boring Samples
BCM Project No. 00-5268-03

Gentlemen:

At the request of General Instrument Corporation, Betz-Converse-Murdoch, Inc. (BCM) analyzed five soil boring samples obtained from a boring drilled in the vicinity of the former site of a buried waste solvent storage tank. Nine samples, beginning at a depth of 45 feet and continuing at 5-foot intervals through 85 feet, were obtained by split-spoon sample collection procedures. The soil samples were placed in glass containers with teflon-lined tops and forwarded to BCM's Laboratory in Norristown, PA. BCM selected five samples, those from 45, 55, 65, 75 and 85 feet below the surface for analysis. The remaining samples have been stored for future analysis if required. The results of the analyses of the soil samples (Table 1) indicate high concentrations of several organic contaminants within the unsaturated zone (above the water table). The results from 45 and 55 feet indicate that the concentrations of contaminants decrease with depth. The significantly lower concentrations found within the saturated zone probably are due to the contaminants having a greater affinity for water than for soil.

Three of the thirteen compounds found in the soils--1,1,1 trichloroethane, trichloroethylene, and tetrachloroethylene--are known carcinogens. 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene, toluene, ethylbenzene, dichlorobenzene, and phenol are hazardous chemicals on the EPA priority pollutant list. Criteria for allowable concentration of any of these parameters in the soil have not been established, nor with the exception of trichloroethylene ((10 parts per billion), NY DEC) have criteria of allowable concentrations of these parameters been established for groundwater. In addition, concentrations of these compounds in the groundwater cannot be derived from the soils information.

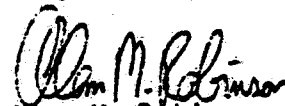
Eastern Group

General Instrument Corporation
June 5, 1981
Page 2

Due to the high levels of several organic compounds in the soil at least as deep as 55 feet below the surface, we recommend that a minimum of three groundwater monitoring wells be established in the vicinity of the soil boring. Well locations can be determined from the review of site plans and/or field review. One well should be established upgradient from the former site of the underground waste solvent storage tank and minimum of two wells be established downgradient from the tank location.

We would be happy to further discuss with you our recommendations for the groundwater monitoring program. Should you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,



Alan M. Robinson
Manager,
Land and Water Resources Group

/ad
Enclosure
cc: R. Rathmell
R. Grzywinski

Table 1

General Instrument Corporation
Hicksville, NY

Soil Samples

Date of Sampling: 5/27/81
Type of Samples: Split spoon soil samples
Analytical Procedure:

Parameter	Depth	Concentration*				
		45'	55'	65'	75' **	85' **
Acetone	200	77	0.3	2	4	
Ethyl acetate	2	ND	ND	ND	ND	ND
Isopropyl alcohol	1,000	250	0.1	2	1	
1,1,1 Trichloroethane	13	8	ND	ND	ND	
Butyl alcohol	212	200	0.3	3	0.7	
Trichloroethylene (TCE)	1,700	300	ND	4	0.2	
Tetrachloroethylene (PCE)	630	300	0.6	5	ND	
Butyl acetate	680	400	ND	2	ND	
Toluene	40	40	1.3	7	0.3	
Ethylbenzene	1,500	80	0.9	4	0.3	
Xylene	7,800	850	4.7	12	1.5	
Dichlorobenzene	13,800	1,300	4.6	40	7.5	
Phenol	505	298	9.5	5.2	2.8	

* all concentrations in micrograms per gram, which is equivalent to parts per million

** within the saturated zone (below the water table)

ND none detected

8. ADEQUACY OF AVAILABLE DATA TO PREPARE FINAL HRS

Existing data are adequate to confirm the existence of ground water contamination and to generate a definitive HRS score. There is no apparent need for additional Phase II efforts for the purpose of supporting remedial cost estimates, because some remedial action is in progress.

9. PHASE II WORK PLAN

Because remedial action has been initiated, no Phase II effort is recommended. It is recommended, however, that the Nassau County Department of Health and the New York Department of Environmental Conservation continue in their present efforts to monitor progress in the remedial effort and ensure that the program of ground water treatment is not terminated prematurely.

APPENDIX

**HAZARDOUS WASTE DISPOSAL SITES REPORT,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

HAZARDOUS WASTE DISPOSAL SITES REPORT
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

47-15-11(2/80)

Code: _____

Site Code: _____

Name of Site: General Instruments Corporation Region: 1

County: Nassau Town/City: Hicksville

Street Address: 600 West John Street

Status of Site Narrative:

Site is an active manufacturing plant for microelectronics components, which discharges wastewater to groundwater. Leakage of an underground waste storage tank (solvents) was discovered in 1980. Remedial action has been initiated by General Instruments. There is also evidence of SPDES violations for discharge to groundwater.

Type of Site: Open Dump ☐
Landfill ☐
Structure ☐

Treatment Pond(s) ☐
Lagoon(s) ☐

Number of Ponds _____
Number of Lagoons _____

Underground tank ☒

Estimated Size _____ Acres

Hazardous Wastes Disposed? Confirmed ☒ Suspected ☐

*Type and Quantity of Hazardous Wastes:

TYPE	QUANTITY (Pounds, drums, tons, gallons)
<u>Waste solvents (mixed)</u>	_____
<u>trichloroethylene</u>	_____
<u>perchloroethylene</u>	_____
<u>xylene</u>	_____
<u>dichlorobenzene</u>	_____

* Use additional sheets if more space is needed.

Name of Current Owner of Site: General Instruments Corporation
 Address of Current Owner of Site: 600 West John St. Hicksville, N.Y.

Time Period Site Was Used for Hazardous Waste Disposal: 1980 spill
 _____, 19 _____ To _____, 19 _____

Is site Active ☒ Inactive ☐

(Site is inactive if hazardous wastes were disposed of at this site and site was closed prior to August 25, 1979)

Types of Samples: Air ☐ Groundwater ☒ None ☐
 Surface Water ☐ Soil ☒

Remedial Action: Proposed ☐ Under Design ☐
 In Progress ☒ Completed ☐
 Nature of Action:

Status of Legal Action: _____ State ☐ Federal ☐

Permits Issued: Federal ☐ Local Government ☐ SPDES ☐
 Solid Waste ☐ Mined Land ☐ Wetlands ☐ Other ☐

X Assessment of Environmental Problems:

The soil and groundwater in the vicinity of a leaking underground solvents tank are contaminated with organic solvents. Remediation to remove soil and pump and treat groundwater have been initiated.

Assessment of Health Problems:

X Persons Completing this Form:

Ecological Analysts, Inc.

for:

New York State Department of Environmental Conservation

New York State Department of Health

Date _____
